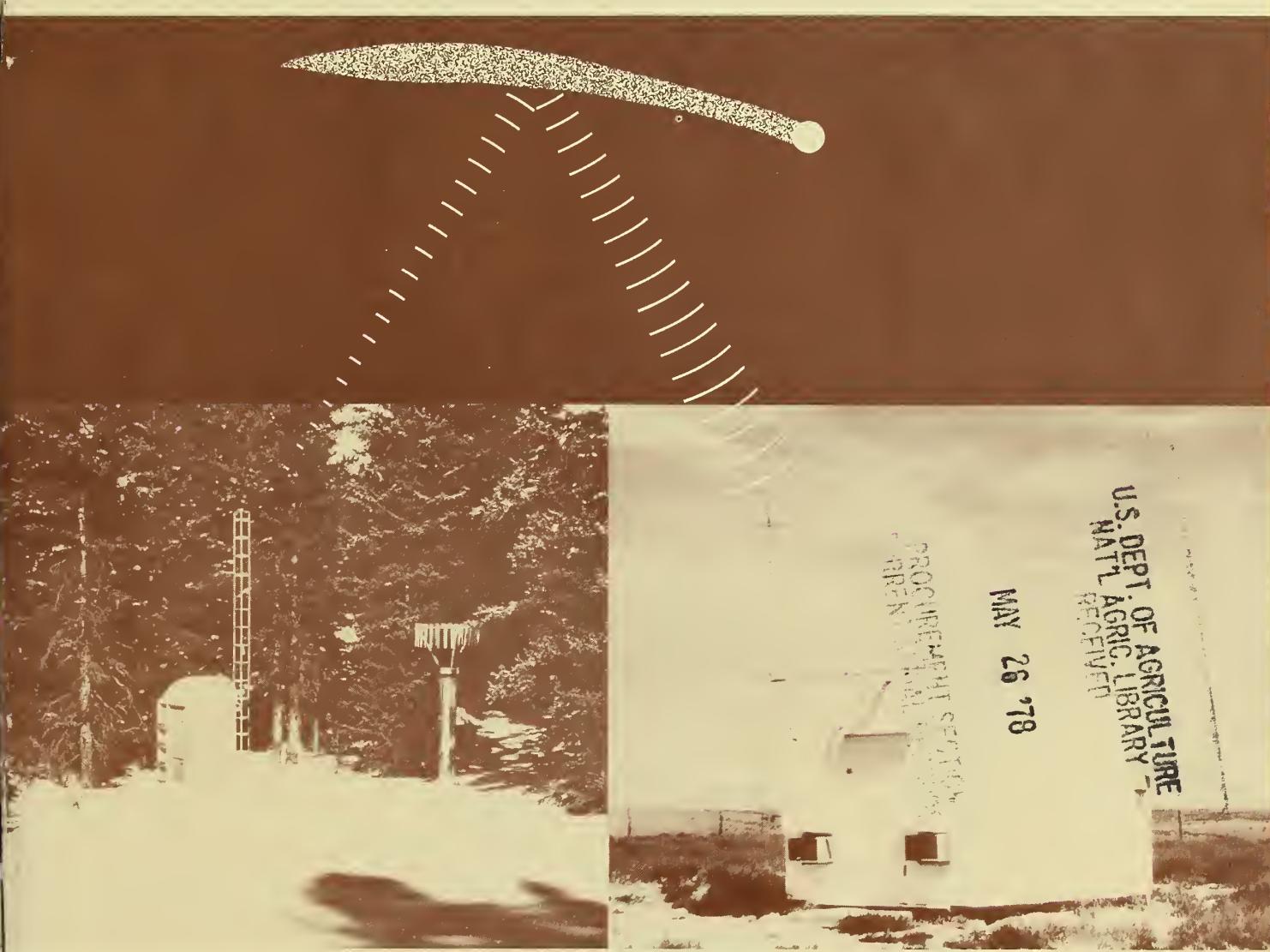


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WATER SUPPLY OUTLOOK FOR OREGON



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U. S. DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Collaborating with
OREGON DEPARTMENT OF WATER RESOURCES

Data included in this report were obtained by the agencies named above in cooperation
with Federal, State and private organizations listed inside the back cover of this report.

AS OF
MAY 1, 1978

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

COVER PHOTO: SOME OF THE DATA IN THIS REPORT HAVE BEEN RECEIVED THROUGH THE SOIL CONSERVATION SERVICE'S NEW SNOTEL SYSTEM WHICH TRANSMITS INFORMATION VIA THE SPACE AGED METEOR BURST METHOD FROM DATA SITES TO MASTER STATIONS LIKE THESE.

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, West Technical Service Center, Room 510, 511 N.W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

| STATE | ADDRESS |
|--------------------|---|
| Alaska | Room 129, 2221 East Northern Lights Blvd., Anchorage, Alaska 99504 |
| Arizona | Room 3008, Federal Building, Phoenix, Arizona 85025 |
| Colorado (N. Mex.) | P. O. Box 17107, Denver, Colorado 80217 |
| Idaho | Room 345, 304 N. 8th. St., Boise, Idaho 83702 |
| Montana | P. O. Box 98, Bismarck, Montana 59715 |
| Nevada | P. O. Box 4850, Reno Nevada 89505 |
| Oregon | 1220 S.W. Third Ave., Portland, Oregon 97204 |
| Utah | 4012 Federal Bldg., 125 South State St., Salt Lake City, Utah 84138 |
| Washington | 360 U.S. Court House, Spokane, Washington 99201 |
| Wyoming | P. O. Box 2440, Casper, Wyoming 82602 |

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P.O. Box 388, Sacramento, California 95802 --- for British Columbia by the Ministry of the Environment, Water Investigations Branch, Parliament Buildings, Victoria, British Columbia V8V 1X5 --- for Yukon Territory by the Department of Indian and Northern Affairs, Northern Operations Branch, 200 Range Road, Whitehorse, Yukon Territory Y1A 3V1 --- and for Alberta, Saskatchewan, and N.W.T. by the Water Survey of Canada, Inland Waters Branch, 110-12 Avenue S.W., Calgary, Alberta T3C 1A6.



WATER SUPPLY OUTLOOK FOR OREGON

and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued

MAY 8, 1978

Issued by

R. M. DAVIS

ADMINISTRATOR
SOIL CONSERVATION SERVICE
WASHINGTON, D.C.

Released by

GUY W. NUTT

STATE CONSERVATIONIST
SOIL CONSERVATION SERVICE
PORTLAND, OREGON

In Cooperation with

OREGON
DEPARTMENT
OF
WATER RESOURCES

Report prepared by

TOMMY A. GEORGE, Snow Survey Supervisor
RONALD A. JONES, Asst. Snow Survey Supervisor
KATHLEEN D. REDDING, Statistical Assistant

SOIL CONSERVATION SERVICE
1220 S.W. THIRD AVENUE
PORTLAND, OREGON 97204

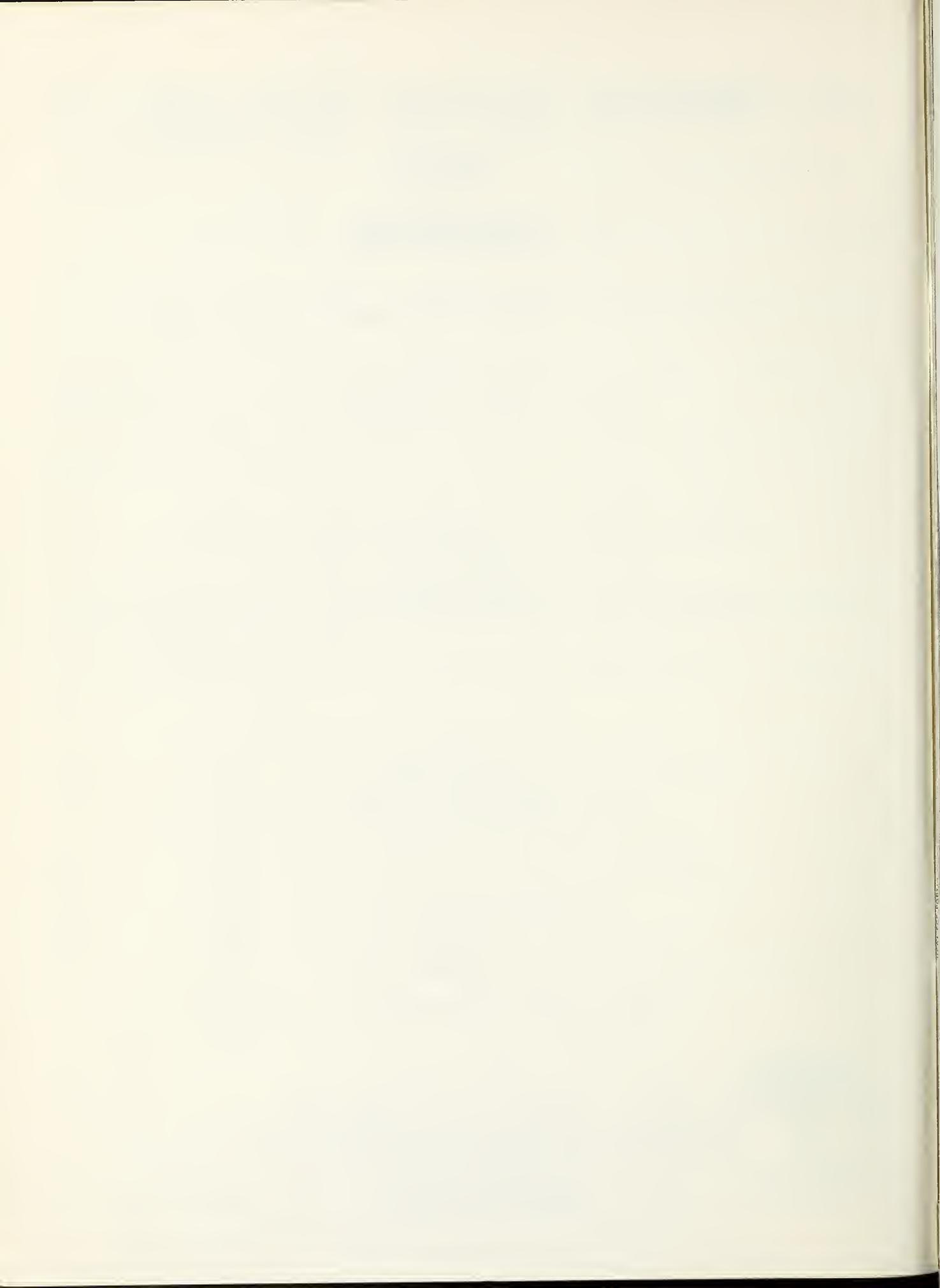
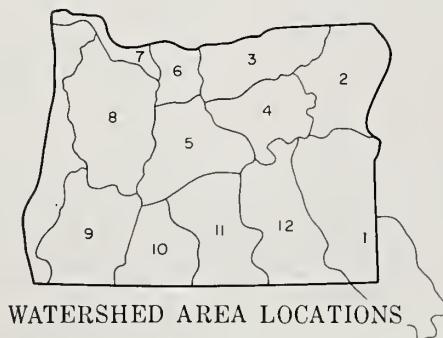
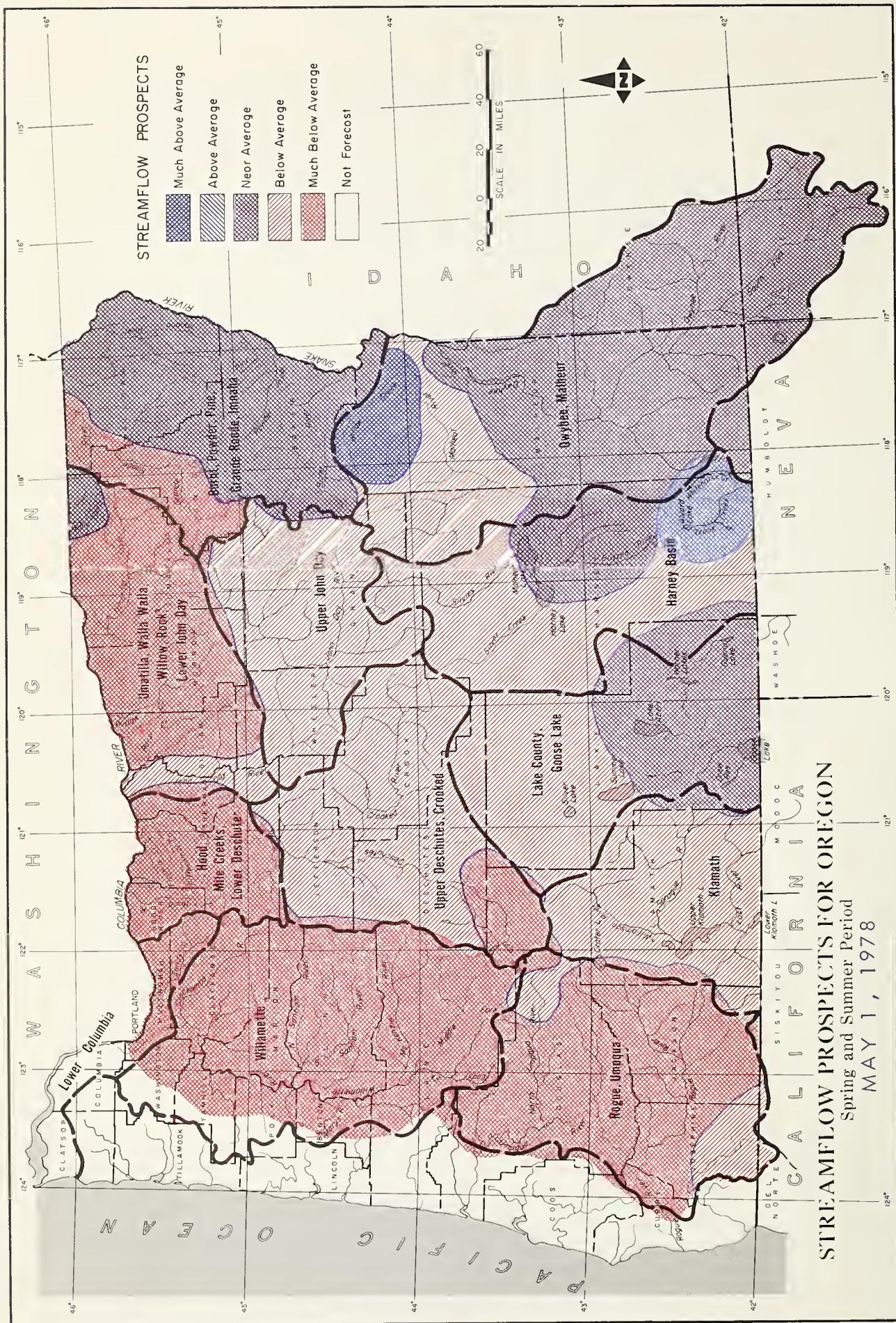


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WATER SUPPLY OUTLOOK for OREGON

M A Y 1, 1978

The water supply outlook is good for most Oregon water users. Late season shortages will occur for users who divert directly from streams except in the extreme eastern fourth of the state. Reservoir storage is excellent and rains during April were above normal in all areas.

SNOW COVER

A poor snow cover generally exists in the state. The snowpack is 25 to 65% of average in the Cascades, 85% of average in the Siskiyous and 35 to 55% in most areas of eastern Oregon. The Wallowa Mountains and the Owyhee drainage are the only areas with normal snow cover for this time of year.

PRECIPITATION

April showers were plentiful with all areas of Oregon receiving above normal amounts of rain. Precipitation ranged from a low of 110% to 115% in the Hood and Rogue River basins to a high of three and one half times normal in Malheur county.

SOIL MOISTURE

Mountain watershed soil moisture is average to above for May 1.

RESERVOIR STORAGE

Reservoir storage is normal or above in all of the principal irrigation reservoirs. Twenty five of these reservoirs are storing 2,628,000 acre feet. This is 107% of the May 1 average.

- continued on next page -

STREAMFLOW

Eastern Oregon streams responded to the heavy April rains. Streams originating in the Cascades did not however, as the rains are still replenishing ground water supplies. Forecasts of spring and summer volumes of streamflow for representative Oregon streams are as follows:

| <u>STREAM</u> | <u>PERIOD</u> | <u>FORECAST % 1958-72 AVG.</u> |
|------------------------------------|---------------|------------------------------------|
| Owyhee net Inflow | May-Sept | 105 |
| Malheur near Drewsey | May-Sept | 85 |
| Deschutes at Benham Falls | May-Sept | 81 |
| Grande Ronde at La Grande | May-Sept | 60 |
| Willamette, Mid. Fk. near Oakridge | May-Sept | 68 |
| Upper Klamath Lake Inflow | May-Sept | 85 |
| Rogue near Raygold | May-Sept | 66 |
| Silvies near Burns | May-Sept | 70 |

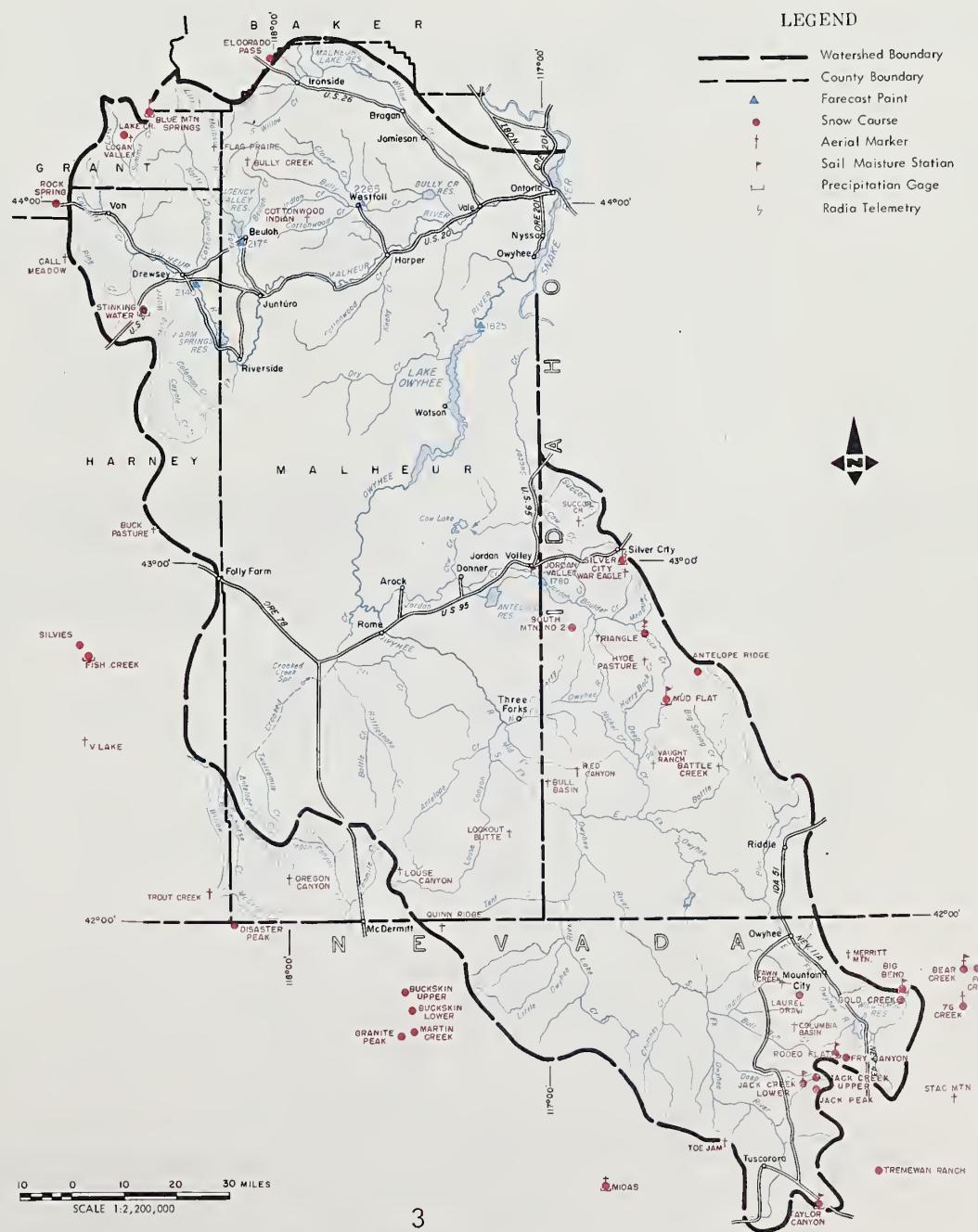
This report contains data furnished by the Oregon Department of Water Resources, U. S. Geological Survey, NOAA National Weather Service and other cooperators.



WATER SUPPLY OUTLOOK OWYHEE, MALHEUR WATERSHEDS OREGON

GENERAL OUTLOOK

WATER SUPPLIES FOR THE Owyhee-Malheur should be adequate. Streamflow forecasts in this area range from 85% of normal on the Malheur near Drewsey to 305% of normal on Bully Creek at Warmsprings. Snow cover is variable. Snow has melted at elevations below 5500 feet. Heavy precipitation, 344% of normal for April, has produced high runoff. Reservoir storage is above average with some reservoirs spilling. Soils are generally well recharged.



STREAMFLOW FORECASTS

| BASIN, STREAM and/or FORECAST POINT | THIS YEAR | | | PAST RECORD | |
|-------------------------------------|--------------------|--------------------|-----------------|--------------------|---------|
| | FORECAST | | FORECAST PERIOD | THOUSAND ACRE FEET | |
| | Thousand Acre Feet | Percent of Average | | Last Year | Average |
| Bully Creek | 40.0 | 305 | March-May | | 13.1 |
| Malheur near Drewsey | 27 | 85 | May-July | | 32 |
| Malheur, North Fork at Beulah | 28 | 85 | May-Sept | | 33 |
| | 32 | 92 | May-July | | 35 |
| | 37 | 92 | May-Sept | | 40 |
| Owyhee Reservoir net Inflow | 166 | 105 | May-July | 51 | 157 |
| | 183 | 105 | May-Sept | 72 | 180 |

FORECAST DATE of LOW FLOW VALUES

| FORECAST POINT | Low Flow Value Second/Ft. | Forecast Date Stream Will Recede to Low Flow Value | Average Date of Low Flow Value |
|------------------|------------------------------|---|--------------------------------------|
| Owyhee near Rome | 1000 250 | June 1 June 26 | May 24 June 20 |

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

| RESERVOIR | Usable Capacity | Usable Storage | | |
|------------------|-----------------|----------------|-----------|---------|
| | | This Year | Last Year | Average |
| Beulah Reservoir | 60.0 | 59.7 | 25.1 | 51.2 |
| Bully Creek | 30.0 | 29.2 | 14.0 | 24.1 |
| Owyhee | 715.0 | 715.5 | 484.9 | 563.8 |
| Warmsprings | 191.0 | 151.0 | 73.3 | 140.1 |

SOIL MOISTURE

| RIVER BASIN | Number of Stations | THIS YEAR'S MOISTURE as PERCENT OF: | |
|---------------|--------------------|-------------------------------------|---------|
| | | Last Year | Average |
| Malheur River | 1 | 160 | 96 |

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

| RIVER BASIN and/or SUB-WATERSHED | Number of Courses Averaged | THIS YEAR'S SNOW WATER AS PERCENT OF | |
|----------------------------------|----------------------------|--------------------------------------|---------|
| | | Last Year | Average |
| Bully Creek | | -- | -- |
| Jordan Creek | | -- | -- |
| Malheur River | 3 | -- | 45 |
| Owyhee River | 4 | -- | 102 |

(a) Estimated. (b) 1958-72 adjusted average. (c) 1958-72, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

WATER SUPPLY OUTLOOK

BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS

OREGON

GENERAL OUTLOOK

NO SERIOUS WATER SHORTAGES ARE EXPECTED IN THIS AREA. STREAMFLOW FORECASTS RANGE FROM 60% OF NORMAL ON THE GRANDE RONDE AT LA GRANDE TO 110% ON THE WALLOWA NEAR JOSEPH. SNOW HAS GENERALLY MELTED BELOW 5500 FEET ELEVATION. SNOW COURSES ABOVE 5500 FEET STILL AVERAGE 80% TO 100% WATER EQUIVALENT. APRIL PRECIPITATION WAS 294% OF AVERAGE. RESERVOIR STORAGE IS ABOVE AVERAGE. SOIL MOISTURE CONTENT IS ALSO ABOVE AVERAGE.



STREAMFLOW FORECASTS

| BASIN, STREAM and/or FORECAST POINT | THIS YEAR | | PAST RECORD | | |
|-------------------------------------|-----------------------|-----------------------|-------------|--------------------|-----------|
| | FORECAST | | PAST RECORD | THOUSAND ACRE FEET | |
| | Thousand Acre Feet | Percent of Average | | Last Year | Average C |
| Bear near Wallowa | 57 | 98 | May-Sept | 58 | |
| Burnt near Hereford | 14.5 | 105 | May-July | 13.8 | |
| | 15.5 | 105 | May-Sept | 14.8 | |
| Catherine near Union | 52 | 98 | May-Sept | 53 | |
| Eagle Creek abv. Skull Creek | 146 | 96 | May-July | 152 | |
| | 162 | 97 | May-Sept | 166 | |
| Grande Ronde at La Grande | 55 | 60 | May-July | 41 | 92 |
| | 58 | 60 | May-Sept | 45 | 96 |
| Hurricane near Joseph | 44 | 98 | May-Sept | 44 | |
| Imnaha at Imnaha | 266 | 105 | May-Sept | 253 | |
| Lostine near Lostine | 111 | 95 | May-Sept | 117 | |
| Powder near Sumpter | 38 | 95 | May-July | 40 | |
| | 39 | 95 | May-Sept | 41 | |
| Wallowa, East Fork near Joseph | 8.3 | 98 | May-July | 8.5 | |
| | 10.5 | 98 | May-Sept | 10.7 | |
| Wallowa near Joseph | 77 | 110 | May-July | 70 | |
| Wolf Creek net Inflow | 5.5 | 72 | May-June | 7.6 | |

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

| RESERVOIR | Usable Capacity | Usable Storage | | |
|---------------|-----------------|----------------|-----------|-----------|
| | | This Year | Last Year | Average C |
| Phillips Lake | 73.5 | 51.3 | 46.7 | -- |
| Thief Valley | 17.4 | 17.4 | 17.4 | 17.5 |
| Unity | 25.2 | 25.7 | 15.8 | 25.1 |
| Wallowa Lake | 37.5 | 28.0 | 29.6 | 26.2 |
| Wolf Creek | 10.4 | 11.1 | 7.9 | -- |

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

| RIVER BASIN and/or SUB-WATERSHED | Number of Courses Averaged | THIS YEAR'S SNOW WATER AS PERCENT OF | |
|------------------------------------|----------------------------|--------------------------------------|-----------|
| | | Last Year | Average C |
| Burnt River | 4 | 479 | 88 |
| Grande Ronde River above La Grande | 4 | 0 | 0 |
| Powder River | 5 | 5767 | 81 |
| Wallowa, Imnaha, Catherine Creek | 6 | 680 | 101 |

SOIL MOISTURE

| RIVER BASIN | Number of Stations | THIS YEAR'S MOISTURE as PERCENT OF: | |
|---|--------------------|-------------------------------------|-----------|
| | | Last Year | Average C |
| Burnt, Powder | 1 | 292. | 112 |
| Grande Ronde, Catherine Creek, Imnaha River | 3 | 114 | 102 |

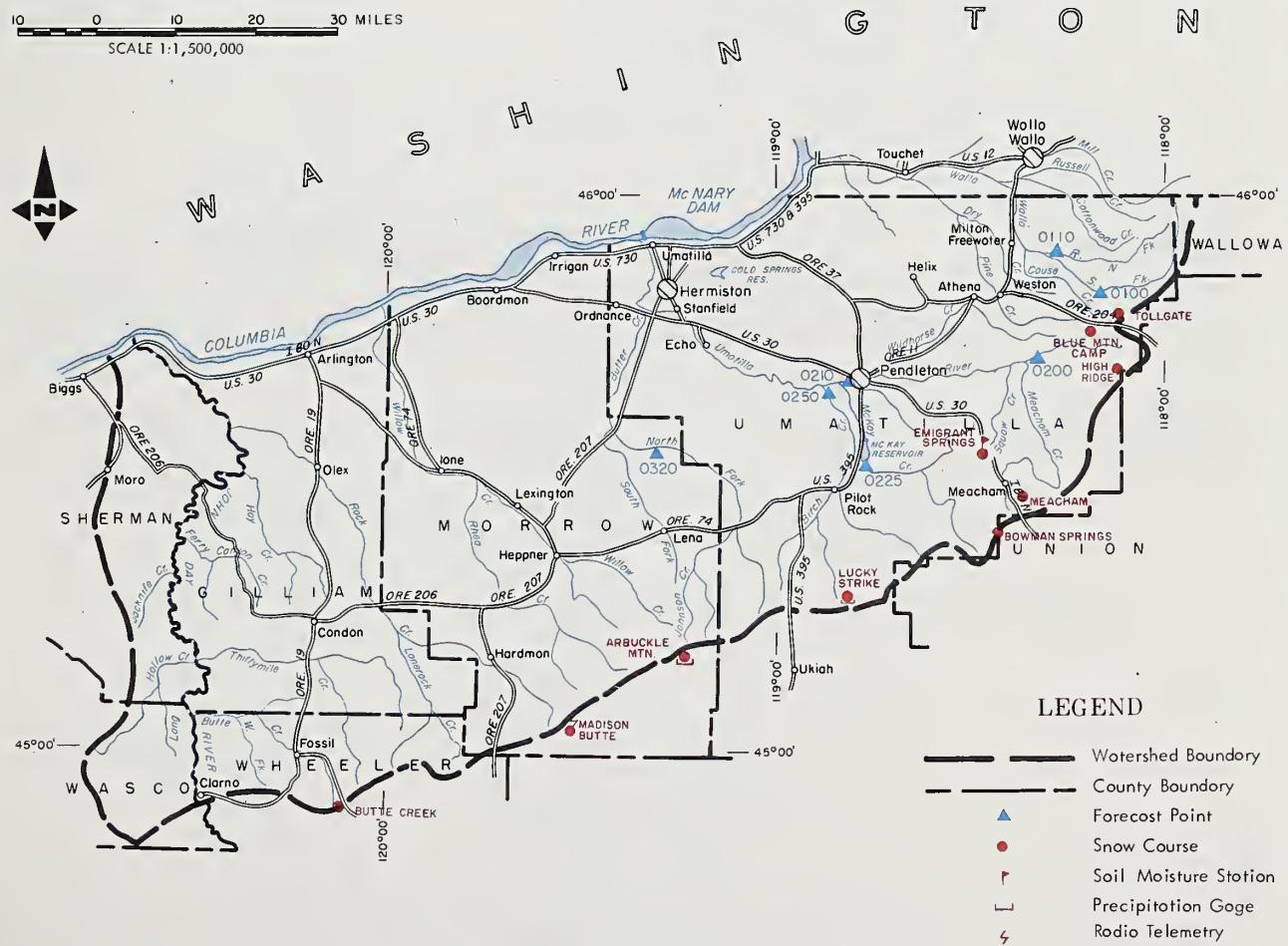
(a) Estimated. (b) 1958-72 adjusted average. (c) 1958-72, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

WATER SUPPLY OUTLOOK

UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS OREGON

GENERAL OUTLOOK

SOME WATER SHORTAGES MAY BE EXPECTED IN THIS AREA IN LATE SEASON. STREAMFLOW FORECASTS RANGE FROM 50% TO 86% OF AVERAGE. THE REMAINING SNOWPACK IS ONLY 36% TO 52% OF NORMAL ON MAJOR DRAINAGES. APRIL PRECIPITATION WAS 189% OF AVERAGE. MAJOR RESERVOIRS REPORT AVERAGE OR ABOVE STORAGE. SOIL MOISTURE IS WELL RECHARGED.



STREAMFLOW FORECASTS

| BASIN, STREAM and/or FORECAST POINT. | THIS YEAR | | | PAST RECORD | |
|--------------------------------------|--------------------|--------------------|-----------------|--------------------|-----------|
| | FORECAST | | FORECAST PERIOD | THOUSAND ACRE FEET | |
| | Thousand Acre Feet | Percent of Average | | Last Year | Average C |
| Birch Creek at Rieth | 3.5 | 50 | May-July | 7.1 | |
| Butter Cr. near Pine City | 2.0 | 60 | May-July | 3.4 | |
| McKay near Pilot Rock | 4.4 | 50 | May-Sept | 8.8 | |
| Umatilla near Gibbon | 22 | 57 | May-July | 39 | |
| Umatilla at Pendleton | 27 | 60 | May-Sept | 45 | |
| Walla Walla, South Fork near Milton | 37 | 55 | May-July | 68 | |
| | 44 | 86 | May-Sept | 51 | |

FORECAST DATE of LOW FLOW VALUES

| FORECAST POINT | Low Flow Value Second/Ft. | Forecast Date Stream Will Recede to Low Flow Value | Average Date of Low Flow Value |
|-----------------------|---------------------------|--|--------------------------------|
| Umatilla at Pendleton | 550 | May 28 | May 22 |

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

| RESERVOIR | Usable Capacity | Usable Storage | | |
|-----------------------|-----------------|----------------|--------------|--------------|
| | | This Year | Last Year | Average C |
| Cold Springs McKay | 50.0 73.8 | 49.5 68.5 | 28.8 29.6 | 49.5 57.6 |

SOIL MOISTURE

| RIVER BASIN | Number of Stations | THIS YEAR'S MOISTURE as PERCENT OF: | |
|---------------------------------------|--------------------|-------------------------------------|-----------|
| | | Last Year | Average C |
| Umatilla, Walla Walla, McKay Creek | 3 | 112 | 100 |

SUMMARY of SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

| RIVER BASIN and/or SUB-WATERSHED | Number of Courses Averaged | THIS YEAR'S SNOW WATER AS PERCENT OF | |
|----------------------------------|----------------------------|--------------------------------------|-----------|
| | | Last Year | Average C |
| McKay Creek | 3 | -- | 36 |
| Umatilla River | 3 | -- | 52 |
| Walla Walla River | 2 | -- | 46 |

(a) Estimated. (b) 1958-72 adjusted average. (c) 1958-72, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

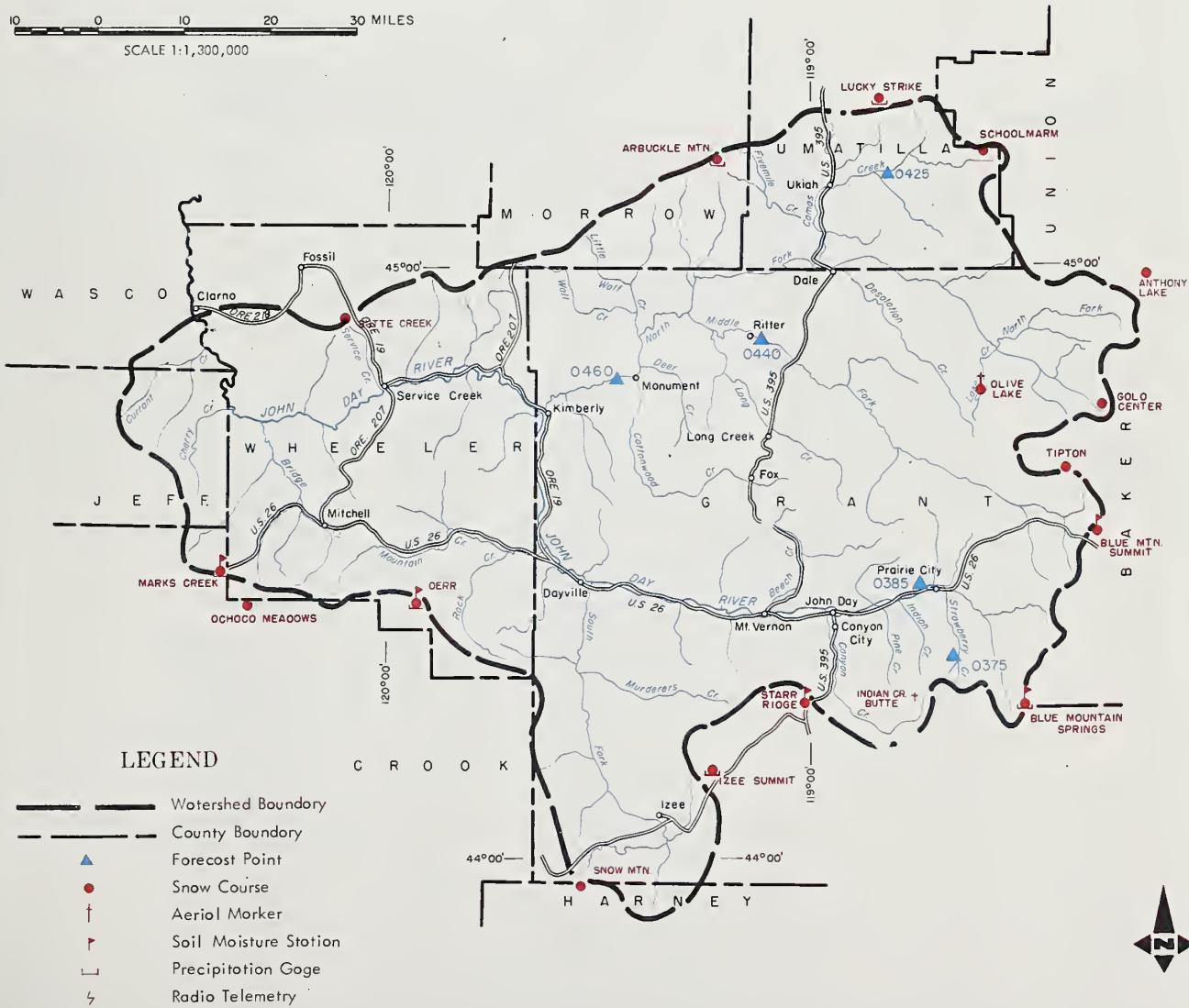
WATER SUPPLY OUTLOOK

UPPER JOHN DAY WATERSHEDS

OREGON

GENERAL OUTLOOK

NO SERIOUS WATER SHORTAGES ARE ANTICIPATED. FORECASTS ARE FOR 80% TO 85% OF NORMAL STREAMFLOW. THE SNOWPACK REMAINING IS AT HIGHER ELEVATIONS AND IS 55% TO 64% OF NORMAL OVER THE AREA. APRIL PRECIPITATION WAS 245% OF AVERAGE. SOIL MOISTURE RECHARGE IS GOOD.



STREAMFLOW FORECASTS

| BASIN, STREAM and/or FORECAST POINT | THIS YEAR | | | PAST RECORD | |
|-------------------------------------|--------------------|--------------------|-----------------|--------------------|---------|
| | FORECAST | | FORECAST PERIOD | THOUSAND ACRE FEET | |
| | Thousand Acre Feet | Percent of Average | | Last Year | Average |
| Camas Creek near Ukiah | 12.9 | 80 | May-July | | 16.2 |
| John Day, Middle Fork at Ritter | 13.3 | 80 | May-Sept | | 16.7 |
| John Day, North Fork at Monument | 56 | 80 | May-July | | 67 |
| John Day, North Fork at Monument | 57 | 80 | May-Sept | | 70 |
| Strawberry near Prairie City | 272 | 80 | May-July | | 340 |
| Strawberry near Prairie City | 283 | 80 | May-Sept | | 354 |
| | 5.5 | 85 | May-July | | 6.5 |
| | 6.1 | 85 | May-Sept | | 7.2 |

SOIL MOISTURE

| RIVER BASIN | Number of Stations | THIS YEAR'S MOISTURE as PERCENT OF: | |
|-------------------------|--------------------|-------------------------------------|-----------|
| | | Last Year | Average c |
| John Day above Dayville | 3 | 132 | 97 |
| John Day, North Fork | 2 | 125 | 100 |

SUMMARY of SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

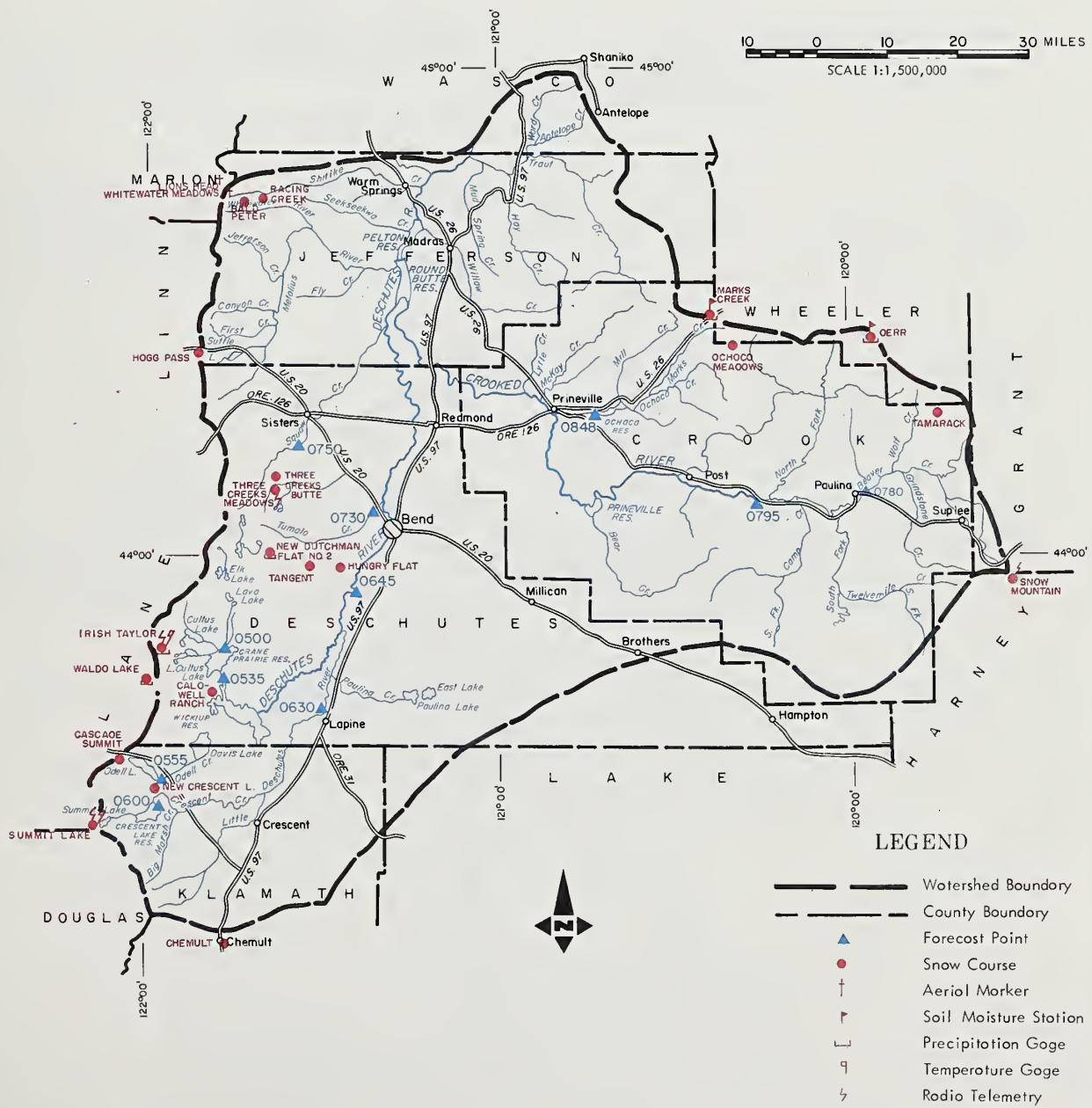
| RIVER BASIN and/or SUB-WATERSHED | Number of Courses Averaged | THIS YEAR'S SNOW WATER AS PERCENT OF | |
|----------------------------------|----------------------------|--------------------------------------|-----------|
| | | Last Year | Average c |
| John Day, North Fork | 7 | 653 | 55 |
| John Day abv. Dayville | 4 | -- | 41 |

(a) Estimated. (b) 1958-72 adjusted average. (c) 1958-72, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

UPPER DESCHUTES, CROOKED WATERSHEDS OREGON

GENERAL OUTLOOK

SOME LOCAL WATER SHORTAGES MAY EXIST IN LATE SEASON WHERE THE ONLY WATER SOURCE IS DIRECT DIVERSION FROM STREAM CHANNELS. WATER SUPPLY FORECASTS RANGE FROM 35% AT CRESCENT LAKE TO 85% ON THE CROOKED RIVER. SNOWPACK WATER EQUIVALENT RANGES FROM NEAR ZERO TO 64% OF AVERAGE ON THE AREA SNOWCOURSES. APRIL PRECIPITATION WAS 258% OF AVERAGE. RESERVOIR STORAGE IS ABOVE AVERAGE IN MAJOR IMPOUNDMENTS. SOIL MOISTURE IS WELL RECHARGED.



STREAMFLOW FORECASTS

| BASIN, STREAM and/or FORECAST POINT | THIS YEAR | | PAST RECORD | | |
|--------------------------------------|--------------------|--------------------|-----------------|--------------------|-----------|
| | FORECAST | | FORECAST PERIOD | THOUSAND ACRE FEET | |
| | Thousand Acre Feet | Percent of Average | | Last Year | Average C |
| Beaver Creek near Paulina | 3.1 | 70 | May-July | 4.4 | |
| | 3.2 | 70 | May-Sept | 4.6 | |
| Crane Prairie Reservoir total Inflow | 51 | 80 | May-July | 64 | |
| | 82 | 78 | May-Sept | 105 | |
| Crescent at Crescent Lake | 5.5 | 35 | May-July | 15.6 | |
| | 6.9 | 35 | May-Sept | 19.6 | |
| Crooked near Post | 28 | 85 | May-Sept | 32 | |
| Deschutes at Bend | 119 | -- | Aug-Sept | -- | |
| Deschutes at Benham Falls | 216 | 77 | May-July | 281 | |
| | 380 | 81 | May-Sept | 471 | |
| Deschutes below Snow Creek | 45 | 80 | May-Sept | 56 | |
| Deschutes, Little near La Pine | 34 | 58 | May-July | 53 | |
| | 43 | 53 | May-Sept | 63 | |
| Ochoco Reservoir net Inflow | 6.9 | 75 | May-Sept | 9.2 | |
| Odell near Crescent | 14.5 | 63 | May-Sept | 23 | |
| Squaw near Sisters | 37 | 80 | May-Sept | 46 | |
| Tumalo near Bend | 29 | 75 | May-Sept | 39 | |

FORECAST DATE of LOW FLOW VALUES

| FORECAST POINT | Low Flow Value Second/Ft. | Forecast Date Stream Will Recede to Low Flow Value | Average Date of Low Flow Value |
|--|---------------------------|--|--------------------------------|
| Crane Prairie net Inflow | 300 | 1/ May 20 | July 15 |
| Crooked R. near Post | 100 | 2/ June 1 | |
| Deschutes at Bend | 1500 | 2/ July 1 | |
| Little Deschutes near La Pine | 400 | 3/ June 7 | |
| | 200 | 3/ June 3 | July 8 |
| <u>1/</u> Inflow should be less than 300 cfs. | | | |
| <u>2/</u> Flow will not be as great as 1500 cfs. | | | |
| <u>3/</u> Flow will not be as great as 400 cfs. | | | |

SOIL MOISTURE

| RIVER BASIN | Number of Stations | THIS YEAR'S MOISTURE as PERCENT OF: | |
|-----------------------------------|--------------------|-------------------------------------|-----------|
| | | Last Year | Average C |
| Crooked R., Upper Deschutes River | 1 | 120 | 93 |

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

| RESERVOIR | Usable Capacity | Usable Storage | | |
|---------------|-----------------|----------------|-----------|-----------|
| | | This Year | Last Year | Average C |
| Crane Prairie | 55.3 | 50.7 | 43.0 | 42.4 |
| Crescent Lake | 86.9 | 54.6 | 70.4 | 52.3 |
| Ochoco | 47.5 | 47.3 | 23.0 | 36.8 |
| Prineville | 153.0 | 161.8 | 99.2 | 146.8 |
| Wickiup | 200.0 | 197.0 | 183.4 | 188.5 |

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

| RIVER BASIN and/or SUB-WATERSHED | Number of Courses Averaged | THIS YEAR'S SNOW WATER AS PERCENT OF | |
|----------------------------------|----------------------------|--------------------------------------|-----------|
| | | Last Year | Average C |
| Crooked, Ochoco | 1 | 0 | 0 |
| Deschutes abv. Wickiup | 2 | 209 | 64 |
| Little Deschutes, | 4 | 151 | 48 |
| Tumalo & Squaw Crs. | 3 | 279 | 51 |

(a) Estimated. (b) 1958-72 adjusted average. (c) 1958-72, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

WATER SUPPLY OUTLOOK

HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS

OREGON

GENERAL OUTLOOK

WATER SUPPLIES MAY BE SOMEWHAT LIMITED IN LATE SEASON IN THIS AREA. FORECASTS ARE FOR 62% TO 74% OF AVERAGE STREAMFLOW. THE REMAINING SNOWPACK IS ABOUT 54% OF NORMAL. APRIL PRECIPITATION WAS ABOVE AVERAGE AT 110%. CLEAR LAKE REPORTS ABOVE AVERAGE STORAGE.



STREAMFLOW FORECASTS

| BASIN, STREAM and/or FORECAST POINT | THIS YEAR | | PAST RECORD | | |
|-------------------------------------|--------------------|--------------------|-----------------|--------------------|----------------------|
| | FORECAST | | FORECAST PERIOD | THOUSAND ACRE FEET | |
| | Thousand Acre Feet | Percent of Average | | Last Year | Average ^c |
| Hood, West Fork near Dee | 58 | 68 | May-July | | 85 |
| White below Tygh Valley | 79 | 74 | May-Sept | | 107 |
| | 49 | 63 | May-July | | 79 |
| | 59 | 62 | May-Sept | | 94 |

FORECAST DATE of LOW FLOW VALUES

| FORECAST POINT | Low Flow Value Second/Ft. | Forecast Date Stream Will Recede to Low Flow Value | Average Date of Low Flow Value |
|---------------------|---------------------------|--|--------------------------------|
| Clear Branch Inflow | *33 | July 15-31 | **39 |

* Average cfs forecast to flow for this two-week period.

** Average cfs for period of record.

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

| RESERVOIR | Usable Capacity | Usable Storage | | |
|-----------|-----------------|----------------|-----------|----------------------|
| | | This Year | Last Year | Average ^c |

Clear Lake (Wasco) 11.9 4.7 5.1 4.6

SUMMARY of SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

| RIVER BASIN and/or SUB-WATERSHED | Number of Courses Averaged | THIS YEAR'S SNOW WATER AS PERCENT OF | |
|----------------------------------|----------------------------|--------------------------------------|----------------------|
| | | Last Year | Average ^c |

Hood River 3 144 54
White River 3 144 54

(a) Estimated. (b) 1958-72 adjusted average. (c) 1958-72, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

**WATER SUPPLY OUTLOOK
LOWER COLUMBIA WATERSHEDS
OREGON
GENERAL OUTLOOK**

THE SNOWPACK IN THE UPPER COLUMBIA RIVER BASIN IS REPORTED TO BE ABOUT 85% OF AVERAGE. THE FORECAST FOR THE COLUMBIA RIVER AT THE DALLES IS FOR ABOUT 90% OF NORMAL DISCHARGE FOR THE MAY-SEPTEMBER PERIOD. THE SANDY RIVER IS FORECAST TO PRODUCE 68% TO 70% NORMAL FLOW. SNOWPACK WATER EQUIVALENT IN THE SANDY DRAINAGE IS 54% OF AVERAGE.



SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

| RIVER BASIN and/or SUB-WATERSHED | Number of Courses Averaged | THIS YEAR'S SNOW WATER AS PERCENT OF | |
|--|----------------------------------|---|-----------------------|
| | | Last Year | Average ^{°C} |
| Sandy River | 2 | 144 | 54 |

STREAMFLOW FORECASTS

| BASIN, STREAM and/or FORECAST POINT | THIS YEAR | | PAST RECORD | |
|-------------------------------------|-----------------------------------|-----------------------|--------------------|---------------------------------|
| | FORECAST Thousand Acre Feet | Percent of Average | FORECAST PERIOD | THOUSAND ACRE FEET Last Year |
| Columbia at The Dalles* | 68,500 | 89 | May-July | 76,815 |
| | 82,500 | 90 | May-Sept | 91,550 |
| Sandy River near Marmot | 154 | 68 | May-July | 227 |
| | 196 | 70 | May-Sept | 282 |

* This is a National Weather Service forecast.

HISTORICAL DATA (Columbia River at The Dalles)

| YEAR | STREAMFLOW ^d (1,000 A.F.) | | | REGULATED PEAK (1,000 cfs) | DATE |
|--------------|--------------------------------------|------------|------------|-------------------------------|---------|
| | APR - SEPT. | APR - JUNE | MAY - JUNE | | |
| 1958 | 97,700 | 72,000 | 58,600 | 593 | May 31 |
| 1959 | 112,500 | 71,900 | 58,900 | 555 | June 23 |
| 1960 | 97,000 | 64,000 | 48,000 | 442 | June 6 |
| 1961 | 101,400 | 74,400 | 64,000 | 699 | June 8 |
| 1962 | 94,600 | 64,100 | 49,200 | 460 | June 5 |
| 1963 | 87,000 | 56,300 | 46,200 | 437 | June 18 |
| 1964 | 109,020 | 70,739 | 61,313 | 662 | June 18 |
| 1965 | 114,137 | 80,024 | 62,477 | 520 | June 9 |
| 1966 | 87,268 | 58,120 | 45,922 | 396 | June 12 |
| 1967 | 107,771 | 72,408 | 65,112 | 622 | June 10 |
| 1968 | 89,000 | 55,500 | 47,900 | 404 | June 13 |
| 1969 | 112,300 | 85,700 | 63,800 | 515 | May 15 |
| 1970 | 88,100 | 62,800 | 55,200 | 425 | May 28 |
| 1971 | 122,900 | 88,400 | 73,700 | 557 | May 13 |
| 1972 | 134,700 | 96,400 | 81,400 | 619 | June 20 |
| 1958-72 Avg. | 104,300 | 72,900 | 59,900 | 529 | |

LOWER COLUMBIA RIVER FLOOD STAGES (with 9.5' tide at Astoria)

| VANCOUVER GAGE (Weather Bu) | FLOW AT THE DALLES (1,000 cfs) | DRAINAGE DISTRICT PUMPHOUSE | | | | | | |
|-----------------------------------|--------------------------------------|-----------------------------|-------------|-----------|-----------|---------|--------|---------|
| | | SANDY | SAUVIE ISL. | SCAPPOOSE | DEER ISL. | RAINIER | BEAVER | WOODSON |
| 35 (1894) | 1210 | 41.2 | 34.2 | 33.3 | 28.5 | 21.9 | 17.5 | 15.5 |
| 34 | 1160 | 40.5 | 33.5 | 32.5 | 27.7 | 21.2 | 17.0 | 15.0 |
| 33 | 1100 | 39.6 | 32.4 | 31.4 | 26.7 | 20.2 | 16.1 | 14.3 |
| 32 (1972) | 1050 | 38.9 | 31.5 | 30.5 | 25.7 | 19.5 | 15.4 | 13.7 |
| 31 (1948) | 1000 | 38.0 | 30.7 | 29.5 | 25.1 | 18.8 | 14.7 | 13.0 |
| 30 | 943 | 36.6 | 29.5 | 28.5 | 24.3 | 18.1 | 14.0 | 12.4 |
| 29 | 897 | 35.5 | 28.5 | 27.7 | 23.7 | 17.5 | 13.4 | 11.8 |
| 28 | 853 | 34.3 | 27.5 | 26.7 | 22.8 | 17.0 | 13.0 | 11.4 |
| 27 (1956) | 811 | 33.0 | 26.5 | 25.6 | 21.8 | 16.2 | 12.5 | 11.0 |
| 26 (1950) | 771 | 32.1 | 25.5 | 24.6 | 20.9 | 15.5 | 12.2 | 10.7 |
| 25 | 733 | 30.7 | 24.2 | 23.2 | 19.7 | 14.6 | 11.7 | 10.3 |
| 24 | 697 | 29.7 | 23.0 | 22.2 | 19.0 | 14.1 | 11.4 | 10.2 |
| 23 | 662 | 29.0 | 22.3 | 21.4 | 18.4 | 13.6 | 11.2 | 10.0 |
| 22 | 628 | 28.1 | 21.4 | 20.3 | 17.2 | 13.0 | 10.9 | 9.7 |
| 21 | 595 | 27.2 | 20.7 | 19.5 | 16.4 | 12.6 | 10.6 | 9.6 |
| 20 (1954) | 564 | 26.2 | 19.8 | 18.6 | 15.5 | 12.1 | 10.2 | 9.4 |
| 19 | 534 | 25.5 | 19.2 | 18.0 | 15.0 | 11.8 | 10.0 | 9.3 |
| 18 | 501 | 24.4 | 18.3 | 17.2 | 14.3 | 11.4 | 9.8 | 9.1 |
| 17 | 479 | 23.4 | 17.4 | 16.4 | 13.7 | 11.0 | 9.6 | 8.9 |
| 16 | 452 | 22.4 | 16.5 | 15.5 | 13.0 | 10.5 | 9.3 | 8.7 |

(a) Estimated. (b) 1958-72 adjusted average. (c) 1958-72, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

WATER SUPPLY OUTLOOK WILLAMETTE WATERSHEDS OREGON

GENERAL OUTLOOK

FORECASTS ARE FOR MUCH BELOW NORMAL STREAMFLOW IN THE WILLAMETTE WATERSHED. STREAMFLOW SHOULD RANGE FROM 58% TO 70% OF AVERAGE. SOME WATER SUPPLY PROBLEMS MAY BE ENCOUNTERED. THE 153% OF AVERAGE APRIL PRECIPITATION WAS A HELP BUT DID NOT SOLVE THE PROBLEM. MOST MAJOR RESERVOIRS ARE NOT UP TO AVERAGE STORAGE. THE SNOWPACK RANGES FROM NEAR ZERO ON THE CLACKAMAS RIVER TO 42% ON THE ROW.



STREAMFLOW FORECASTS

| BASIN, STREAM and/or FORECAST POINT | THIS YEAR | | | PAST RECORD | |
|---|--------------------|--------------------|-----------------|--------------------|-----------|
| | FORECAST | | FORECAST PERIOD | THOUSAND ACRE FEET | |
| | Thousand Acre Feet | Percent of Average | | Last Year | Average C |
| Clackamas at Estacada | 268 | 60 | May-July | 447 | |
| Clackamas above three Lynx | 326 | 58 | May-Sept | 562 | |
| McKenzie at McKenzie Bridge | 206 | 60 | May-July | 343 | |
| McKenzie near Vida | 270 | 61 | May-Sept | 440 | |
| McKenzie, So. Fork near Rainbow | 214 | 65 | May-July | 329 | |
| Oak Grove Fork above Power Intake | 308 | 65 | May-Sept | 474 | |
| Row near Dorena | 468 | 65 | May-July | 720 | |
| Row near Dorena | 616 | 65 | May-Sept | 947 | |
| Willamette, Mid. Fk. blw. N. Fk. nr. Oakridge | 90 | 64 | May-July | 140 | |
| Willamette, No. Fk. of Mid. Fk. near Oakridge | 110 | 65 | May-Sept | 169 | |
| Willamette at Salem | 55 | 62 | May-July | 89 | |
| Willamette at Salem | 81 | 63 | May-Sept | 128 | |
| Santiam, North at Mehama | 37 | 70 | May-July | 53 | |
| Santiam, South at Waterloo | 41 | 70 | May-Sept | 58 | |
| Willamette, Mid. Fk. blw. N. Fk. nr. Oakridge | 320 | 65 | May-July | 493 | |
| Willamette, No. Fk. of Mid. Fk. near Oakridge | 390 | 65 | May-Sept | 600 | |
| Willamette, Mid. Fk. blw. N. Fk. nr. Oakridge | 203 | 63 | May-July | 323 | |
| Willamette, No. Fk. of Mid. Fk. near Oakridge | 248 | 65 | May-Sept | 382 | |
| Willamette, No. Fk. of Mid. Fk. near Oakridge | 314 | 68 | May-July | 355 | 462 |
| Willamette, No. Fk. of Mid. Fk. near Oakridge | 382 | 68 | May-Sept | 432 | 562 |
| Willamette at Salem | 79 | 65 | May-July | 121 | |
| Willamette at Salem | 97 | 68 | May-Sept | 141 | |
| Willamette at Salem | 1702 | 65 | May-July | 2619 | |
| Willamette at Salem | 2057 | 65 | May-Sept | 3165 | |

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

| RIVER BASIN and/or SUB-WATERSHED | Number of Courses Averaged | THIS YEAR'S SNOW WATER AS PERCENT OF | |
|--|----------------------------------|---|-----------|
| | | Last Year | Average C |
| Clackamas River | 2 | 0 | 0 |
| McKenzie River | 3 | 96 | 34 |
| Row River | 2 | 111 | 42 |
| Santiam River | 4 | 150 | 28 |
| Willamette, Mid. Fk. | 3 | 102 | 23 |

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

| RESERVOIR | Usable Capacity | Usable Storage | | |
|-----------------|--------------------|----------------|--------------|-----------|
| | | This Year | Last Year | Average C |
| Blue River | 85.6* | 59.7 | 73.6 | -- |
| Cottage Grove | 30.0* | 23.7 | 22.1 | 23.4 |
| Cougar | 155.2* | 94.1 | 86.5 | 108.6 |
| Detroit | 299.9* | 172.2 | 193.6 | 250.2 |
| Dorena | 70.5* | 55.6 | 63.2 | 54.8 |
| Fall Creek | 115.0* | 74.0 | 74.7 | 96.7 |
| Fern Ridge | 94.2* | 77.8 | 41.3 | 86.7 |
| Foster | 30.0* | 11.6 | 24.2 | 18.6 |
| Green Peter | 270.0* | 158.3 | 218.8 | 199.9 |
| Hills Creek | 200.0* | 147.3 | 61.2 | 157.9 |
| Lookout Point | 337.2* | 143.1 | 131.4 | 257.5 |
| Timothy Lake | 61.7 | 56.6 | 49.5 | 57.5 |
| Henry Hagg Lake | 53.0 | 53.5 | 34.2 | -- |

* Multiple purpose
reservoir--space
reserved primarily
for flood runoff.

(a) Estimated. (b) 1958-72 adjusted average. (c) 1958-72, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

WATER SUPPLY OUTLOOK

ROGUE, UMPQUA, WATERSHEDS

OREGON

Area 9

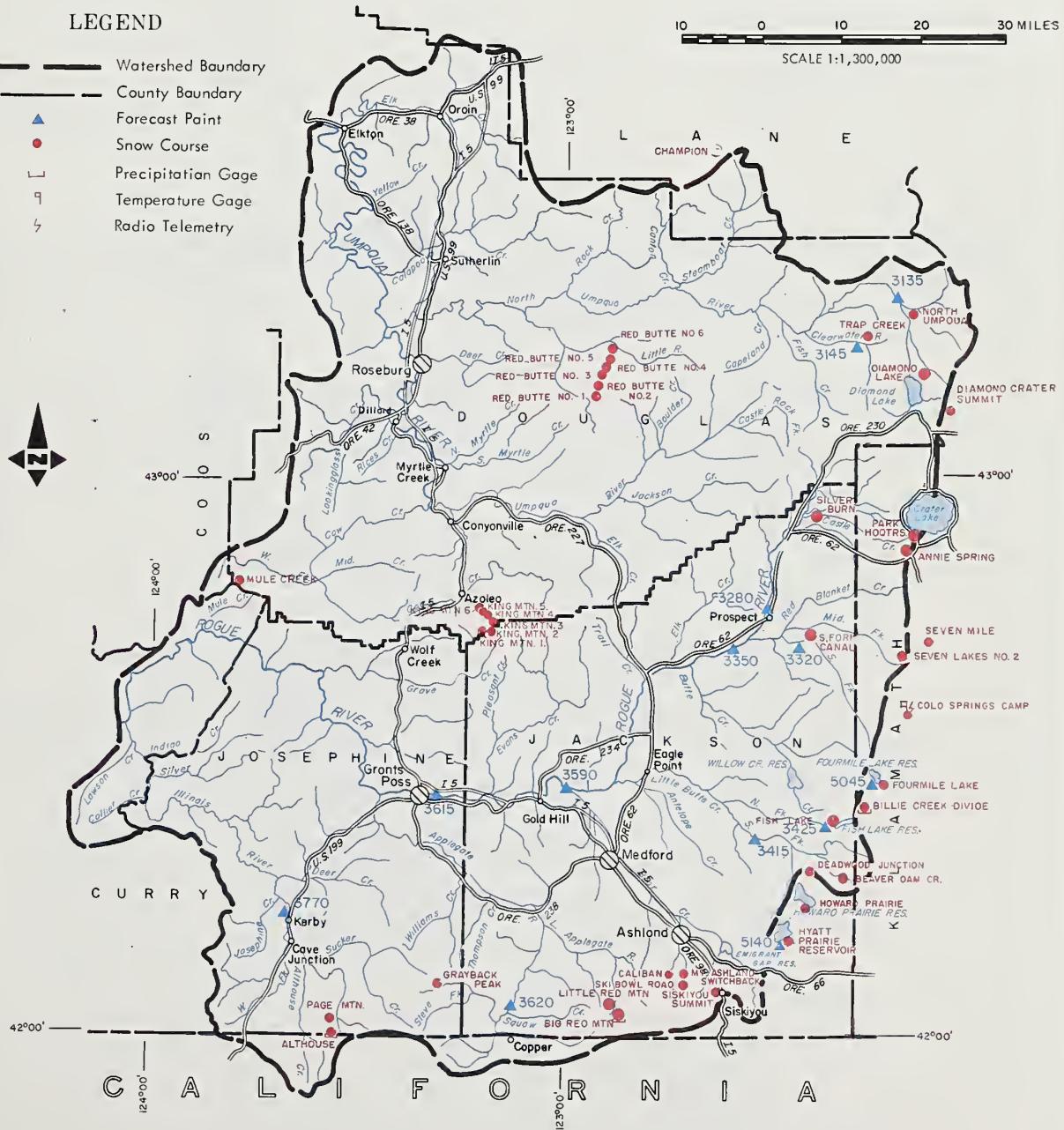
GENERAL OUTLOOK

SOME WATER SHORTAGES MAY BE EXPERIENCED IN THIS AREA. STREAMFLOW FORECASTS ARE GENERALLY 65% TO 85% OF AVERAGE. THE LOW FORECAST IN THE AREA IS FOR 45% OF NORMAL INFLOW TO HYATT PRAIRIE RESERVOIR. THE SNOWPACK REMAINING IS 20% TO 63% OF NORMAL ON MAJOR DRAINAGES. APRIL PRECIPITATION WAS 115% OF NORMAL. AREA RESERVOIRS REPORT NEAR OR ABOVE AVERAGE STORAGE.

LEGEND

- Watershed Boundary
- County Boundary
- ▲ Forecast Point
- Snow Course
- Precipitation Gage
- Temperature Gage
- Radio Telemetry

10 0 10 20 30 MILES
SCALE 1:1,300,000



STREAMFLOW FORECASTS

| BASIN, STREAM and/or FORECAST POINT | THIS YEAR | | PAST RECORD | | |
|--|--------------------|--------------------|--------------------|------|-----|
| | FORECAST | | THOUSAND ACRE FEET | | |
| | Thousand Acre Feet | Percent of Average | | | |
| Applegate near Copper | 65 | 80 | May-July | 81 | |
| Clearwater above Trap Creek | 70 | 80 | May-Sept | 87 | |
| Fourmile Lake net Inflow | 46 | 80 | May-Sept. | 57 | |
| Hyatt Reservoir net Inflow | 2.1 | 70 | May-July | 3.0 | |
| Illinois River near Kerby | 1.0 | 45 | May-July | 2.2 | |
| Little Butte, N. Fk. at Fish Lake nr. Lake Cr. | 77 | 85 | May-July | 91 | |
| Little Butte, S. Fk. near Lake Creek | 82 | 85 | May-Sept | 97 | |
| Rogue above Prospect | 9.3 | 80 | May-Sept | 11.6 | |
| Rogue, South Fork near Prospect | 9.7 | 60 | May-July | 16.1 | |
| Rogue at Raygold near Central Point | 12.0 | 65 | May-Sept | 18.4 | |
| Rogue at Grants Pass | 117 | 64 | May-July | 184 | |
| Umpqua, No. blw. Lemolo Res. nr. Toketee Falls | 159 | 66 | May-Sept | 239 | |
| | 30 | 65 | May-July | 46 | |
| | 36 | 65 | May-Sept | 56 | |
| | 325 | 66 | May-July | 301 | 493 |
| | 428 | 66 | May-Sept | 429 | 648 |
| | 412 | 66 | May-Sept | | 627 |
| | 118 | 85 | May-Sept | | 139 |

FORECAST DATE of LOW FLOW VALUES

| FORECAST POINT | Low Flow Value Second/Ft. | Forecast Date Stream Will Recede to Low Flow Value | Average Date of Low Flow Value |
|-----------------------------------|------------------------------|---|--------------------------------------|
| Little Butte Creek, South Fork | 100 | May 15 | May 27 |

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

| RESERVOIR | Usable Capacity | Usable Storage | | |
|----------------|-----------------|----------------|-----------|-----------|
| | | This Year | Last Year | Average C |
| Emigrant Lake | 39.0 | 38.8 | 28.5 | 37.0* |
| Fish Lake | 8.0 | 5.3 | 6.4 | 6.0 |
| Fourmile Lake | 16.1 | 8.5 | 10.6 | 10.7 |
| Howard Prairie | 60.0 | 48.1 | 33.7 | 44.9 |
| Hyatt Prairie | 16.1 | 14.0 | 10.8 | 14.0 |

* Average for years of record (in base period) after reconstruction.

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

| RIVER BASIN and/or SUB-WATERSHED | Number of Courses Averaged | THIS YEAR'S SNOW WATER AS PERCENT OF | |
|--|----------------------------------|---|-----------|
| | | Last Year | Average C |
| Applegate | | -- | -- |
| Bear Creek | 1 | 558 | 89 |
| Butte Creek | 4 | 393 | 20 |
| Illinois River | | -- | -- |
| North Umpqua | 3 | 438 | 54 |
| Rogue River | 4 | 388 | 63 |

(a) Estimated. (b) 1958-72 adjusted average. (c) 1958-72, 15 year average (d) Corrected to natural flow. (e) Not scheduled.

WATER SUPPLY OUTLOOK

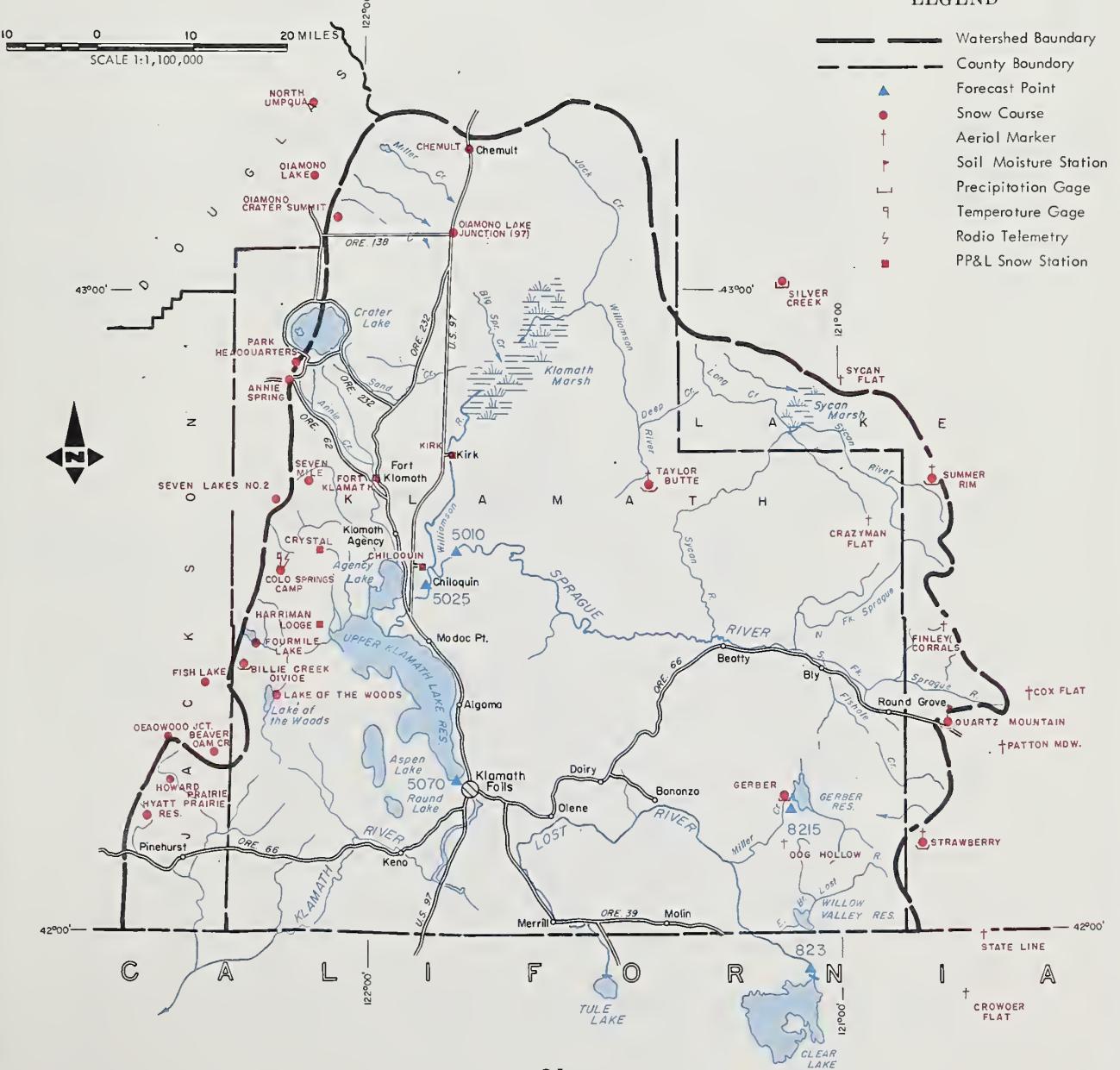
KLAMATH WATERSHEDS

OREGON

GENERAL OUTLOOK

NO SERIOUS WATER SHORTAGES ARE ANTICIPATED WHERE ACCESS TO STORED WATER IS AVAILABLE. STREAMFLOW IS FORECAST TO BE 75% TO 85% OF NORMAL ON THE MAJOR STREAMS. APRIL PRECIPITATION WAS HEAVY AT 255% OF AVERAGE. THE REMAINING SNOWPACK IS GENERALLY HALF OF AVERAGE AND RESTRICTED TO HIGH ELEVATIONS. RESERVOIR STORAGE IS NOT QUITE AVERAGE FOR MAY 1. SOIL MOISTURE IS REPORTED AS NORMAL.

LEGEND



STREAMFLOW FORECASTS

| BASIN, STREAM and/or FORECAST POINT | THIS YEAR | | PAST RECORD | | |
|-------------------------------------|--------------------|--------------------|-----------------|--------------------|-----------|
| | FORECAST | | FORECAST PERIOD | THOUSAND ACRE FEET | |
| | Thousand Acre Feet | Percent of Average | | Last Year | Average c |
| Clear Lake Reservoir Inflow | 12.1 | 80 | May-Sept | 15.1 | |
| Gerber Reservoir Inflow | 3.8 | 80 | May-Sept | 4.8 | |
| Sprague near Chiloquin | 124 | 75 | May-Sept | 166 | |
| Upper Klamath Lake net Inflow | 300 | 85 | May-Sept | 353 | |
| Williamson below Sprague River | 244 | 85 | May-Sept | 287 | |

SOIL MOISTURE

| RIVER BASIN | Number of Stations | THIS YEAR'S MOISTURE as PERCENT OF: | |
|---------------|--------------------|-------------------------------------|-----------|
| | | Last Year | Average c |
| Upper Klamath | 1 | 146 | 104 |

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

| RESERVOIR | Usable Capacity | Usable Storage | | |
|--------------------|-----------------|----------------|-----------|-----------|
| | | This Year | Last Year | Average c |
| Clear Lake | 440.2 | 229.7 | 195.3 | 266.5 |
| Gerber | 94.0 | 68.0 | 32.6 | 68.5 |
| Upper Klamath Lake | 584.0 | 488.9 | 454.3 | 517.4 |

SUMMARY of SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

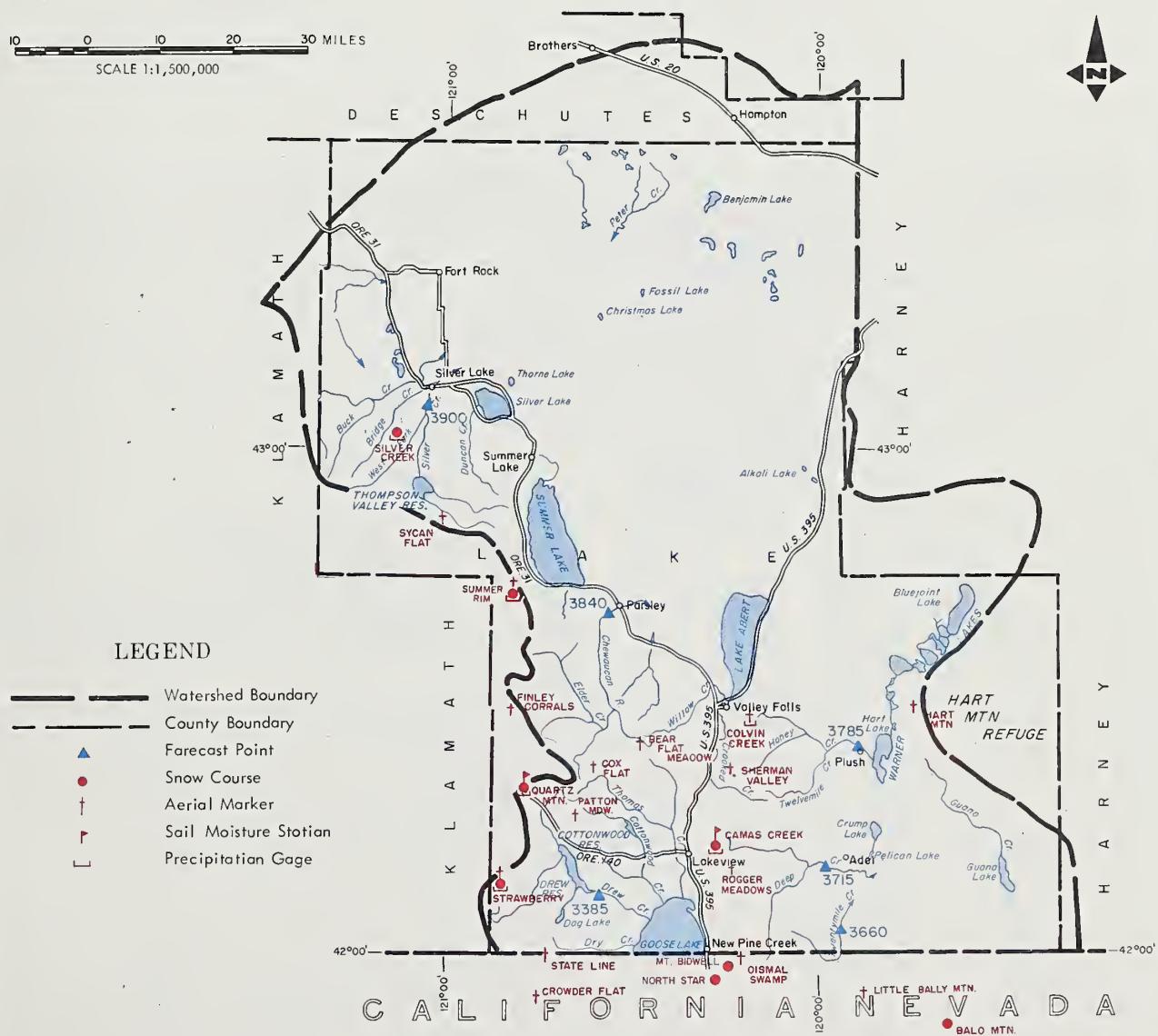
| RIVER BASIN and/or SUB-WATERSHED | Number of Courses Averaged | THIS YEAR'S SNOW WATER AS PERCENT OF | |
|----------------------------------|----------------------------|--------------------------------------|-----------|
| | | Last Year | Average c |
| Lost River | 2 | -- | 134 |
| Sprague River | 2 | 13200 | 85 |
| Upper Klamath | 5 | 1196 | 57 |
| Williamson River | 2 | 1200 | 42 |

(a) Estimated. (b) 1958-72 adjusted average. (c) 1958-72, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

WATER SUPPLY OUTLOOK LAKE COUNTY, GOOSE LAKE WATERSHEDS OREGON

GENERAL OUTLOOK

STREAMFLOW FORECASTS IN THIS AREA RANGE FROM 70% TO 90% OF AVERAGE. ANY WATER SHORTAGES WILL PROBABLY BE LOCALIZED PROBLEMS. RESERVOIRS REPORT ABOVE AVERAGE STORAGE. APRIL PRECIPITATION WAS 286% OF AVERAGE. THE SNOWPACK IS RESTRICTED TO HIGH ELEVATIONS. FEW SNOWCOURSES REPORTED SNOW ON THE GROUND ALTHOUGH SOME THAT DID WERE ABOVE AVERAGE.



STREAMFLOW FORECASTS

| BASIN, STREAM and/or FORECAST POINT | THIS YEAR | | | PAST RECORD | |
|-------------------------------------|--------------------|--------------------|-----------------|--------------------|-----------|
| | FORECAST | | FORECAST PERIOD | THOUSAND ACRE FEET | |
| | Thousand Acre Feet | Percent of Average | | Last Year | Average C |
| Chewaucan near Paisley | 48 | 85 | May-July | 6.7 | 56 |
| | 51 | 85 | May-Sept | 9.1 | 60 |
| Deep above Adel | 37 | 85 | May-July | | 43 |
| | 38 | 85 | May-Sept | | 45 |
| Drews Reservoir net Inflow | 7.7 | 80 | May-July | | 9.7 |
| Honey Creek near Plush | 9.0 | 80 | May-July | | 11.3 |
| | 9.1 | 80 | May-Sept | | 11.4 |
| Silver Creek near Silver Lake | 7.5 | 70 | May-July | | 10.7 |
| Twentymile near Adel | 10.0 | 90 | May-Sept | | 11.1 |

SOIL MOISTURE

| RIVER BASIN | Number of Stations | THIS YEAR'S MOISTURE as PERCENT OF: | |
|---|--------------------|-------------------------------------|-----------|
| | | Last Year | Average C |
| Chewaucan, Silver Creek, Drew Creek Honey, Deep, 20-Mi. Cr. | 1 | 146 | 104 |
| | 1 | 124 | 94 |

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

| RESERVOIR | Usable Capacity | Usable Storage | | |
|-----------------|-----------------|----------------|-----------|-----------|
| | | This Year | Last Year | Average C |
| Cottonwood | 8.7 | 8.7 | 2.0 | 6.7* |
| Drews | 63.0 | 58.0 | 22.0 | 55.3 |
| Thompson Valley | No Rpt. | | | |

* Average for years of record (in base period) after reconstruction.

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

| RIVER BASIN and/or SUB-WATERSHED | Number of Courses Averaged | THIS YEAR'S SNOW WATER AS PERCENT OF | |
|----------------------------------|----------------------------|--------------------------------------|-----------|
| | | Last Year | Average C |
| Chewaucan River | 3 | 13500 | 84 |

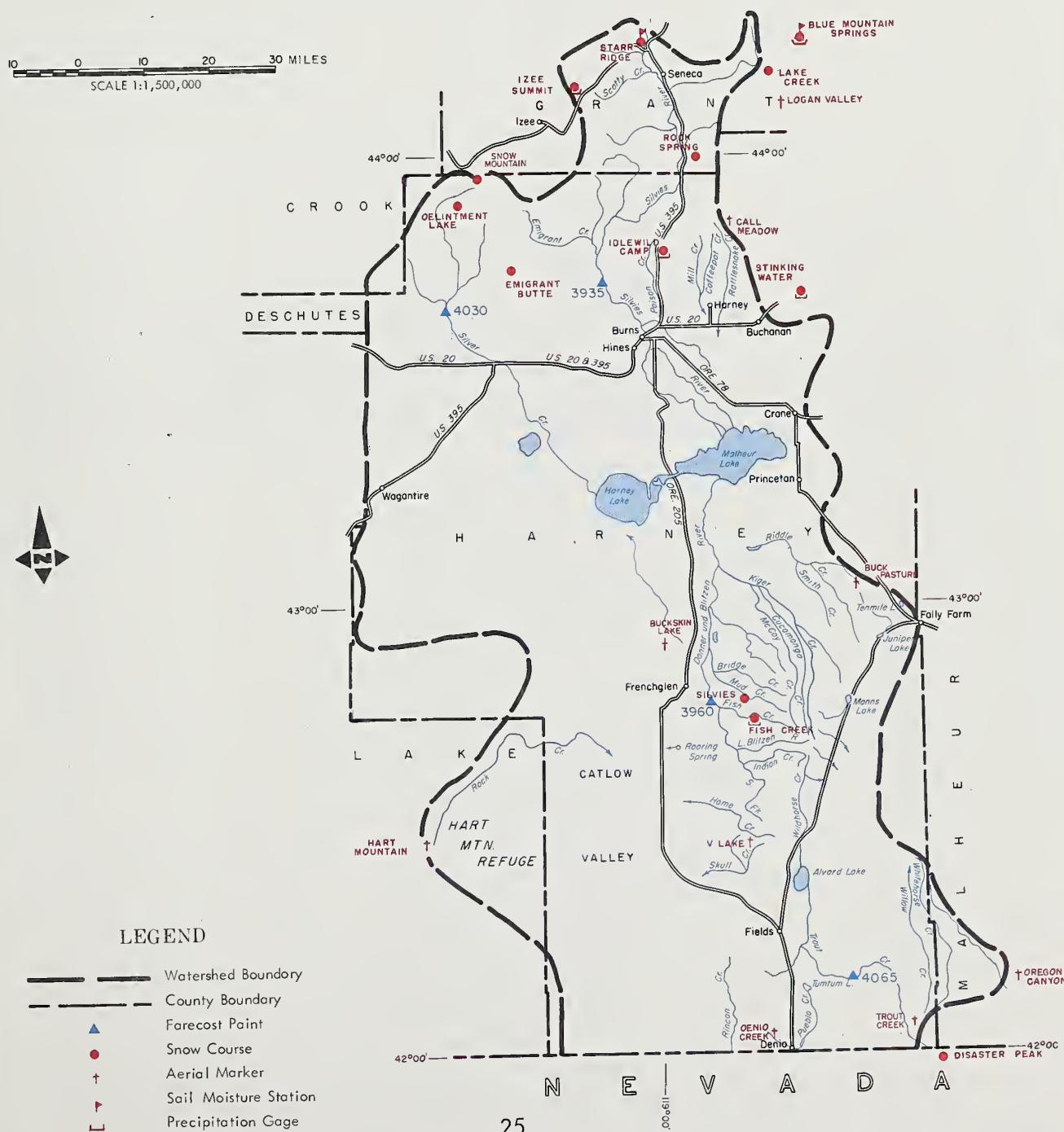
| | | | |
|------------------|---|-------|-----|
| Deep Creek | 2 | -- | 114 |
| Drew Creek | 2 | 0 | 0 |
| Honey Creek | 1 | 30200 | 83 |
| Silver Creek | | -- | -- |
| Twentymile Creek | | -- | -- |

(a) Estimated. (b) 1958-72 adjusted average. (c) 1958-72, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

WATER SUPPLY OUTLOOK HARNEY BASIN WATERSHEDS OREGON

GENERAL OUTLOOK

NO SERIOUS WATER SHORTAGES ARE EXPECTED. WATER SUPPLY FORECASTS RANGE FROM 70% TO 150% OF NORMAL. THE SNOWPACK IN THIS AREA AVERAGES ABOUT 37% OVER THE BASIN ALTHOUGH LOCAL AREAS MAY BE HIGHER. APRIL PRECIPITATION WAS HIGH AT 295% OF AVERAGE. SOIL MOISTURE CONDITIONS ARE REPORTED AS ABOVE AVERAGE.



STREAMFLOW FORECASTS

| BASIN, STREAM and/or FORECAST POINT | THIS YEAR | | | PAST RECORD | |
|-------------------------------------|--------------------|--------------------|-----------------|--------------------|-----------|
| | FORECAST | | FORECAST PERIOD | THOUSAND ACRE FEET | |
| | Thousand Acre Feet | Percent of Average | | Last Year | Average C |
| Donner und Blitzen near Frenchglen | 41 | 110 | May-July | | 37 |
| | 44 | 105 | May-Sept | | 42 |
| Silver near Riley | 3.6 | 70 | May-July | | 5.1 |
| Silvies River near Burns | 23 | 70 | May-July | 4.3 | 33 |
| | 24 | 70 | May-Sept | 8.4 | 35 |
| Trout Creek near Denio | 8.7 | 150 | May-July | | 5.8 |
| | 9.3 | 150 | May-Sept | | 6.2 |

SOIL MOISTURE

| RIVER BASIN | Number of Stations | THIS YEAR'S MOISTURE as PERCENT OF: | | RIVER BASIN and/or SUB-WATERSHED | Number of Courses Averaged | THIS YEAR'S SNOW WATER AS PERCENT OF | |
|---------------------------|--------------------|-------------------------------------|-----------|---|----------------------------|--------------------------------------|----------------------|
| | | Last Year | Average C | | | Last Year | Average C |
| Silvies River, Silver Cr. | 1 | 121 | 102 | Donner und Blitzen R. Silver Creek Silvies River Trout Creek | 4 | -- -- -- -- | -- -- 37 -- |

(a) Estimated. (b) 1958-72 adjusted average. (c) 1958-72, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

BASIC DATA SUPPLEMENT 1

MAY 1, 1978

SNOW

| DRAINAGE BASIN and/or SNOW COURSE | THIS YEAR | | PAST REC. | | | |
|-----------------------------------|----------------|------------------|-------------------|------------------------|------------------|------------------|
| | Date of Survey | Snow Depth (In.) | Water Cont. (In.) | Water Content (inches) | Last Yr. | Ave ^c |
| OWYHEE, MALHEUR WATERSHEDS | | | | | | |
| Antelope Ridge (Ida.) | | No Rpt. | -- | -- | | |
| Battle Creek (Ida.)*** | | e | -- | -- | | |
| Bear Creek (Nev.) | 4/24 | 57 | 27.7 | 8.2 | 20.1 | |
| Big Bend (Nev.) | 4/24 | 6 | 2.8 | 0.0 | 1.3 | |
| Blue Mountain Springs | 4/28 | 11 | 4.7 | 0.0 | 10.2 | |
| Blue Mtn. Springs Pillow | | No Rpt. | -- | -- | | |
| Buck Pasture*** | | e | -- | -- | | |
| Buckskin, Lower (Nev.) | | e | -- | 0.0 | -- | |
| Buckskin, Upper (Nev.) | | e | -- | 0.0 | -- | |
| Bull Basin (Ida.)*** | | e | -- | -- | | |
| Bully Creek*** | | e | -- | -- | | |
| Call Meadow*** | | e | -- | -- | | |
| Columbia Basin (Nev.)*** | | e | -- | -- | | |
| Cottonwood-Indian*** | | e | -- | -- | | |
| Disaster Peak (Nev.) | | e | -- | -- | | |
| Eldorado Pass | 4/28 | 0 | 0.0 | 0.0 | 0.0 ^b | |
| Fawn Creek (Nev.) | | e | -- | -- | | |
| Fish Creek | | e | -- | -- | | |
| Fish Creek*** | | e | -- | -- | | |
| Fish Creek Pillow | | e | -- | -- | | |
| Flag Prairie*** | | e | -- | -- | | |
| Fox Creek (Nev.) | | e | -- | -- | | |
| Fry Canyon (Nev.) | 4/24 | 0 | 0.0 | 0.0 | 1.1 | |
| Gold Creek (Nev.) | 4/24 | 0 | 0.0 | 0.0 | 0.3 | |
| Granite Peak (Nev.) | | e | -- | -- | | |
| Hyde Pasture (Ida.) | | e | -- | -- | | |
| Jack Creek, Lower (Nev.) | 4/24 | 0 | 0.0 | -- | 0.1 | |
| Jack Creek, Upper (Nev.) | 4/24 | 9 | 4.2 | -- | 3.4 | |
| Jack Peak (Nev.) | 4/24 | 73 | 30.2 | 12.9 | 26.7 | |
| Lake Creek R.S. | | e | -- | -- | | |
| Lake Creek R.S. Pillow | 4/28 | -- | 0.0 | -- | -- | |
| Laurel Draw (Nev.)*** | 4/24 | 0 | 0.0 | 0.0 | | |
| Logan Valley*** | | e | -- | -- | | |
| Lookout Butte*** | | e | -- | -- | | |
| Loose Canyon*** | | e | -- | -- | | |
| Martin Creek (Nev.) | | e | -- | -- | | |
| Merritt Mountain (Nev.)*** | | e | -- | -- | | |
| Midas (Nev.) | | e | -- | -- | | |
| Mud Flat (Ida.) | | No Rpt. | -- | -- | | |
| Oregon Canyon*** | | e | -- | -- | | |
| Quinn Ridge (Nev.)*** | | e | -- | -- | | |
| Red Canyon (Ida.) | | e | -- | -- | | |
| Rock Spring | 4/28 | 0 | 0.0 | 0.0 | 0.3 ^b | |
| Rodeo Flat (Nev.) | 4/24 | 0 | 0.0 | 0.0 | 1.1 | |
| 76 Creek (Nev.)*** | 4/24 | 18 | 9.1 | 0.0 | -- | |
| Silver City (Ida.) | 5/4 | 20 | 8.3 | 0.0 | 3.9 ^b | |
| Silver City (Ida.)*** | | e | -- | -- | | |
| Silvies | | e | -- | -- | | |
| Silvies*** | | e | -- | -- | | |
| Silvies Pillow | | e | -- | -- | | |
| South Mountain #2 (Ida.) | 4/30 | 18 | 8.8 | 0.0 | 7.1 | |
| Stag Mountain (Nev.)*** | | e | -- | -- | | |
| Stinking Water | 5/1 | 0 | 0.0 | -- | 0.0 | |
| Succor Creek (Ida.)*** | | e | -- | -- | | |
| Taylor Canyon (Nev.) | 4/24 | 0 | 0.0 | 0.0 | 0.1 | |
| Toe Jam (Nev.)*** | | e | -- | -- | | |
| Tremewan Ranch (Nev.) | 4/24 | 0 | 0.0 | -- | -- | |
| Triangle (Ida.)*** | | No Rpt. | -- | -- | | |
| Trout Creek*** | | e | -- | -- | | |
| "V" Lake | | e | -- | -- | | |
| Vaught Ranch (Ida.)*** | | e | -- | -- | | |
| War Eagle (Ida.)*** | | e | -- | -- | | |

| DRAINAGE BASIN and/or SNOW COURSE | THIS YEAR | | PAST REC. | | | |
|--|----------------|------------------|-------------------|------------------------|-------------------|------------------|
| | Date of Survey | Snow Depth (In.) | Water Cont. (In.) | Water Content (inches) | Last Yr. | Ave ^c |
| BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS | | | | | | |
| Aneroid Lake #1 | | No | Rpt. | 6.7 | 40.7 | |
| Aneroid Lake #2 | 4/30 | 79 | 36.0 | 5.0 | 36.2 | |
| Anthony Lake | 4/26 | 58 | 26.9 | 9.6 | 30.4 | |
| Bald Mountain (Ore.)*** | 4/30 | 60 | 25.8 | 0.0 | 22.5 | |
| Beaver Reservoir (Rev.) | 5/1 | 0 | 0.0 | 0.0 | 9.2 | |
| Beaver Reservoir Pillow | 5/1 | -- | 0.0 | -- | -- | |
| Big Sheep*** | 4/30 | 48 | 22.0 | 0.0 | 24.5 | |
| Blue Mtn. Summit | 4/25 | 0 | 0.0 | 0.0 | 1.7 | |
| Bourne | 4/27 | 9 | 3.4 | 0.0 | -- | |
| Bourne Pillow | 4/27 | 24 | 10.0 | 0.0 | -- | |
| Bourne Pillow | 4/27 | -- | 13.3 | -- | -- | |
| County Line | 5/1 | 0 | 0.0 | 0.0 | 0.4 | |
| Dooley Mountain | 4/27 | 0 | 0.0 | 0.0 | 2.1 | |
| Eilertson Meadows | 4/25 | 10 | 3.5 | 0.0 | 4.7 | |
| Eilertson Mdw. Pillow | 4/25 | 8 | 3.0 | -- | -- | |
| Eldorado Pass | 4/28 | 0 | 0.0 | 0.0 | 0.0 ^b | |
| Gold Center | 4/25 | T | 0.1 | 0.0 | 4.4 | |
| Gold Center Pillow | 4/25 | -- | 0.0 | -- | -- | |
| Goodrich Lake | | e | -- | 0.0 | 38.5 | |
| Little Alps | 4/26 | 30 | 10.5 | 0.9 | 13.7 ^b | |
| Little Antone | 4/26 | 0 | 0.0 | 0.0 | 0.0 | |
| Little Antone Alt. | 4/26 | 0 | 0.0 | 0.0 | -- | |
| Lucky Strike | 4/29 | 11 | 4.1 | 0.0 | 9.2 ^b | |
| Lucky Strike Pillow | 4/29 | -- | 0.0 | 0.0 | -- | |
| Meacham | 4/25 | 0 | 0.0 | 0.0 | 1.8 | |
| Mirror Lake*** | 4/30 | 77 | 81.4 | 20.6 | 79.3 | |
| Moss Spring | 4/30 | 54 | 23.2 | 6.8 | 23.3 | |
| Schneider Meadow | 4/30 | 56 | 28.4 | 0.0 | 25.4 ^b | |
| Schneider Meadow Pillow | 4/30 | -- | 18.8 | -- | -- | |
| Schoolmarm | 5/1 | 0 | 0.0 | 0.0 | 0.1 ^b | |
| Standley*** | 4/30 | 98 | 42.1 | 9.4 | 35.3 | |
| Taylor Green | 4/30 | 22 | 9.6 | 0.0 | 12.8 ^b | |
| Taylor Green Pillow | 4/30 | -- | 0.0 | -- | -- | |
| Tipton | 4/25 | 0 | 0.0 | 0.0 | 1.8 | |
| Tipton Snow Pillow | 4/25 | 18 | 7.5 | 0.0 | -- | |
| Tipton Snow Pillow | 4/25 | -- | 10.0 | -- | -- | |
| Tollgate | 4/25 | 24 | 11.2 | 0.0 | 19.2 | |
| TV Ridge*** | 4/30 | 57 | 26.2 | 1.1 | 25.2 | |
| West Eagle Meadows*** | 4/30 | 50 | 22.0 | 0.0 | -- | |
| Wolf Creek | | e | -- | -- | -- | |
| Wolf Creek Pillow | | e | -- | -- | -- | |
| UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS | | | | | | |
| Arbuckle Mountain | 4/29 | 0 | 0.0 | 0.0 | 0.0 | 2.8 |
| Arbuckle Mtn. Pillow | 4/29 | 33 | 13.6 | -- | -- | |
| Arbuckle Mtn. Pillow | 4/29 | -- | 16.8 | 6.3 | -- | |
| Blue Mountain Camp | 4/25 | 0 | 0.0 | 0.0 | 5.1 ^b | |
| Bowman Springs Pillow | 4/29 | 0 | 0.0 | 0.0 | -- | |
| Bowman Springs Pillow | 4/29 | -- | 0.0 | 0.0 | -- | |
| Butte Creek Summit | 5/1 | 0 | 0.0 | 0.0 | -- | |
| Emigrant Springs | 4/25 | 0 | 0.0 | 0.0 | 0.4 | |
| Emigrant Springs Pillow | 4/25 | -- | 0.0 | -- | -- | |
| High Ridge | 4/27 | 40 | 18.2 | 0.8 | -- | |
| Lucky Strike | 4/29 | 11 | 4.1 | 0.0 | 9.2 ^b | |
| Lucky Strike Pillow | 4/29 | -- | 0.0 | 0.0 | -- | |
| Meacham | 4/25 | 0 | 0.0 | 0.0 | 1.8 | |
| Tollgate | 4/25 | 24 | 11.2 | 0.0 | 19.2 | |

BASIC DATA SUPPLEMENT 1

MAY 1, 1978

SNOW

| DRAINAGE BASIN and/or SNOW COURSE | THIS YEAR | | | PAST REC. | |
|-------------------------------------|----------------|------------------|-------------------|------------------------|----------|
| | Date of Survey | Snow Depth (In.) | Water Cont. (In.) | Water Content (inches) | Last Yr. |
| UPPER JOHN DAY WATERSHEDS | | | | | |
| Anthony Lake | 4/26 | 58 | 26.9 | 9.6 | 30.4 |
| Arbuckle Mountain | 4/29 | 0 | 0.0 | 0.0 | 2.8 |
| Arbuckle Mountain Pillow | 4/29 | 33 | 13.6 | -- | -- |
| Arbuckle Mountain Pillow | 4/29 | -- | 16.8 | 6.3 | -- |
| Blue Mountain Springs | 4/28 | 11 | 4.7 | 0.0 | 10.2 |
| Blue Mt. Springs Pillow | | No | Rpt. | | |
| Blue Mt. Summit | 4/25 | 0 | 0.0 | 0.0 | 1.7 |
| Butte Creek Summit | 5/1 | 0 | 0.0 | 0.0 | -- |
| Derr | | e | | -- | -- |
| Gold Center | 4/25 | T | 0.1 | 0.0 | 4.4 |
| Gold Center Pillow | 4/25 | -- | 0.0 | -- | -- |
| Indian Creek Butte*** | | e | | -- | -- |
| Izee Summit | 4/28 | 0 | 0.0 | 0.0 | 1.9 |
| Lucky Strike | 4/29 | 11 | 4.1 | 0.0 | 9.2 b |
| Lucky Strike Pillow | 4/29 | -- | 0.0 | 0.0 | -- |
| Marks Creek | 5/1 | 0 | 0.0 | 0.0 | 0.0 b |
| Ochoco Meadows | | e | | -- | -- |
| Olive Lake*** | 4/25 | 37 | 15.9 | 4.3 | 26.6 |
| Schoolmarm | 5/1 | 0 | 0.0 | 0.0 | 0.1 |
| Snow Mountain | | e | | -- | -- |
| Snow Mt. Pillow | | e | | -- | -- |
| Starr Ridge | 4/28 | 0 | 0.0 | 0.0 | 0.4 |
| Tipton | 4/25 | 0 | 0.0 | 0.0 | 1.8 |
| Tipton Snow Pillow | 4/25 | 18 | 7.5 | 0.0 | -- |
| Tipton Snow Pillow | 4/25 | -- | 10.0 | -- | -- |
| UPPER DESCHUTES, CROOKED WATERSHEDS | | | | | |
| Bald Peter | 4/28 | 64 | 29.8 | 4.8 | -- |
| Caldwell Ranch | | e | | -- | -- |
| Cascade Summit | 4/28 | 19 | 8.0 | 6.1 | 24.8 |
| Chemult Alternate | 4/27 | 0 | 0.0 | 0.0 | -- |
| Derr | | e | | -- | -- |
| Hogg Pass | 4/25 | 41 | 16.9 | 11.4 | 41.3 |
| Hogg Pass Pillow | | No | Rpt. | | |
| Hungry Flat | 4/27 | 0 | 0.0 | 0.0 | 0.0 |
| Irish-Taylor Pillow | 4/27 | 63 | 24.5 | 14.0 | -- |
| Irish-Taylor Pillow | 4/27 | -- | 19.0 | -- | -- |
| Lionshead*** | 4/28 | 0 | 0.0 | 0.0 | -- |
| Marks Creek | 5/1 | 0 | 0.0 | 0.0 | 0.0 b |
| New Crescent Lake | 4/26 | 0 | 0.0 | 0.0 | 4.4 |
| New Dutchman Flat #2 | 4/27 | 84 | 35.2 | 14.6 | 54.0 |
| Ochoco Meadows | | e | | -- | -- |
| Racing Creek | 4/28 | 3 | 1.2 | 0.0 | -- |
| Snow Mountain | | e | | -- | -- |
| Snow Mt. Pillow | | e | | -- | -- |
| Summit Lake Pillow | 4/26 | 77 | 28.0 | 17.5 | -- |
| Summit Lake Pillow | 4/26 | -- | 30.4 | 13.3 | -- |
| Tamarack | | e | | -- | -- |
| Tangent | 4/27 | 10 | 5.1 | 0.0 | 12.3 |
| Three Creek Butte | 4/30 | 0 | 0.0 | 0.0 | 1.6 |
| Three Creek Meadow | 4/28 | 1 | 0.5 | 0.0 | 13.7 |
| Three Creek Mdw. Pillow | 4/28 | 22 | 9.4 | 0.0 | -- |
| Waldo Lake | | e | | -- | -- |
| Whitewater Meadow | 4/28 | 0 | 0.0 | 0.0 | -- |

SNOW

| DRAINAGE BASIN and/or SNOW COURSE | THIS YEAR | | | PAST REC. | |
|---|----------------|------------------|-------------------|------------------------|----------|
| | Date of Survey | Snow Depth (In.) | Water Cont. (In.) | Water Content (inches) | Last Yr. |
| HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS | | | | | |
| Brooks Meadows | | | e | | -- |
| Clear Lake | 4/28 | 0 | 0.0 | 0.0 | 5.0 |
| Clear Lake (Experimental) | 4/28 | 0 | 0.0 | 0.0 | 9.7 b |
| Greenpoint Res. | | | e | | -- |
| Greenpoint Res. Pillow | | | e | | -- |
| Mt. Hood Test Site | 4/27 | 108 | 49.8 | 28.4 | 67.6 |
| Mud Ridge Pillow | 4/28 | 0 | 0.0 | 10.6 | -- |
| Mud Ridge Pillow | 4/28 | -- | 0.0 | 7.3 | -- |
| Red Hill | | | e | | -- |
| Red Hill Pillow | | | e | | -- |
| Still Creek | 4/28 | 0 | 0.0 | 6.2 | 20.1 |
| Switchback | | | e | | -- |
| Tilly Jane | | | e | | -- |
| Umbrella Falls | 4/29 | 101 | 49.0 | 29.2 | 70.7 b |
| WILLAMETTE WATERSHEDS | | | | | |
| Cascade Summit | 4/28 | 19 | 8.0 | 6.1 | 24.8 |
| Champion | 4/27 | 28 | 12.0 | 10.8 | 26.9 |
| Clackamas Lake | | | e | | -- |
| Clear Lake | 4/28 | 0 | 0.0 | 0.0 | 5.0 |
| Clear Lake (Expt.) | 4/28 | 0 | 0.0 | 0.0 | 9.7 |
| Dead Horse Grade | 4/29 | 0 | 0.0 | 0.1 | 11.0 b |
| Detroit (Town) | | | e | | -- |
| Detroit Dam | | | e | | -- |
| Golden Curry Creek | 4/27 | 0 | 0.0 | 0.0 | 1.9 |
| Hogg Pass | 4/24 | 41 | 16.9 | 11.4 | 41.3 |
| Hogg Pass Pillow | | No | Rpt. | | |
| Jump-Off-Joe Pillow | 4/28 | -- | 0.0 | -- | -- |
| Lake Harriet | 5/1 | 0 | 0.0 | 0.0 | -- |
| Laurel Mountain | 5/1 | 0 | 0.0 | -- | 0.0 |
| Laying Creek | 4/27 | 0 | 0.0 | -- | 0.0 |
| Lookout Point Dam | 4/28 | 0 | 0.0 | -- | -- |
| Lost Creek Ranch | | | e | | -- |
| Lund Park | 4/27 | 0 | 0.0 | -- | 0.0 b |
| Marion Forks | 4/28 | 0 | 0.0 | 0.0 | 5.0 b |
| Marion Forks Pillow | | No | Rpt. | | |
| Marys Peak (Rev.) | | e | | -- | -- |
| McCredie Springs | 4/28 | 0 | 0.0 | -- | 0.0 |
| McKenzie | 4/29 | 40 | 19.4 | 20.0 | 44.9 |
| McKenzie Bridge | | e | | -- | 0.0 |
| Mill City | | e | | -- | 0.0 |
| Mt. Hood Test Site | 4/27 | 108 | 49.8 | 28.4 | 67.6 |
| Oakridge | 4/28 | 0 | 0.0 | -- | -- |
| Peavine Ridge Pillow | 4/27 | -- | 0.0 | 0.0 | 11.6 b |
| Railroad Overpass | 4/28 | 0 | 0.0 | 0.0 | 0.0 |
| Saddle Mountain Pillow | 5/1 | -- | 0.0 | 0.0 | -- |
| Salt Creek Falls | 4/28 | 0 | 0.0 | 1.7 | 9.5 |
| Santiam Junction | 4/28 | 0 | 0.0 | 0.0 | 13.3 |
| Santiam Junction Pillow | 4/28 | -- | 0.0 | -- | -- |
| Seine Creek Pillow | 5/1 | -- | 0.0 | 0.0 | -- |
| Still Creek | 4/28 | 0 | 0.0 | 6.2 | 20.1 |
| Summit Lake Pillow | 4/26 | 77 | 28.0 | 17.8 | -- |
| Summit Lake Pillow | 4/26 | -- | 30.4 | 13.3 | -- |
| Timothy Lake | 5/1 | 0 | 0.0 | 0.0 | 10.7 |
| Valsetz Summit | 5/1 | 0 | 0.0 | -- | -- |
| Vida | | e | | -- | 0.0 |
| Waldo Lake | | e | | -- | -- |
| Weaver Creek | 4/27 | 0 | 0.0 | 0.0 | 0.0 |
| White Branch Slide | 4/29 | 0 | 0.0 | 0.0 | 0.4 |
| Whitewater Bridge | 4/28 | 0 | 0.0 | 0.0 | 0.0 |

BASIC DATA SUPPLEMENT 1

MAY 1, 1978

SNOW

| DRAINAGE BASIN and/or SNOW COURSE | THIS YEAR | | PAST REC. | |
|-----------------------------------|----------------|------------------|-------------------|------------------------|
| | Date of Survey | Snow Depth (In.) | Water Cont. (In.) | Water Content (inches) |
| | | Last Yr. | Ave C | |
| ROGUE, UMPQUA | | | | |
| WATERSHEDS | | | | |
| Althouse | | e | — | — |
| Annie Spring | 4/28 | 90 | 43.2 | 2.6 44.4 |
| Beaver Dam Creek | 5/1 | 0 | 0.0 | 0.0 7.3 |
| Big Red Mountain | | e | — | — |
| Billie Creek Divide | 4/25 | 14 | 5.9 | 1.5 12.0 |
| Billie Creek Div. Pillow | 4/25 | 12 | 5.0 | — |
| Billie Creek Div. Pillow | 4/25 | — | 7.3 | 2.0 |
| Caliban | 4/27 | 84 | 37.0 | 7.0 39.4 |
| Caliban (Alternate) | 4/27 | 76 | 31.2 | 8.0 |
| Champion | 4/27 | 28 | 12.0 | 10.8 26.9 |
| Cold Springs Camp | 4/24 | 64 | 26.0 | 8.2 |
| Cold Spgs. Camp Pillow | 4/24 | 30 | 13.2 | — |
| Cold Spgs. Camp Pillow | 4/24 | — | 14.7 | — |
| Deadwood Junction | 5/1 | 0 | 0.0 | 0.0 2.8 |
| Diamond-Crater Summit(Rev.) | 4/26 | 56 | 22.2 | 4.4 29.9 |
| Diamond Lake | 4/26 | 20 | 8.4 | 0.7 16.7 |
| Fish Lake | 4/25 | 0 | 0.0 | 0.0 6.2 |
| Fourmile Lake | 4/25 | 35 | 10.4 | 2.4 19.7 |
| Fourmile Lake Pillow | 4/25 | 56 | 26.0 | — |
| Fourmile Lake Pillow | 4/25 | — | 27.7 | 2.9 |
| Grayback Peak | | e | — | — |
| Howard Prairie Reservoir | 5/1 | 0 | 0.0 | 0.0 2.4 |
| Hyatt Prairie Reservoir | 5/1 | 0 | 0.0 | 0.0 |
| King Mountain #1 | 4/28 | 0 | 0.0 | 0.0 5.5 |
| King Mountain #2 | 4/28 | 0 | 0.0 | 0.0 3.1 |
| King Mountain #3 | 4/28 | 0 | 0.0 | 0.0 0.0 |
| King Mountain #4 | 4/28 | 0 | 0.0 | 0.0 0.0 |
| King Mountain #5 | 4/28 | 0 | 0.0 | 0.0 0.0 |
| King Mountain #6 | 4/28 | 0 | 0.0 | 0.0 0.0 |
| Little Red Mountain | | e | — | — |
| Mt. Ashland Switchback | 4/27 | 80 | 33.5 | 6.6 37.6 |
| Mule Creek | 4/28 | 0 | 0.0 | 0.0 |
| North Umpqua | 4/28 | 0 | 0.0 | 0.0 4.6 |
| Page Mountain | | e | — | — |
| Park Headquarters | 4/28 | 121 | 55.6 | 14.2 61.2 |
| Red Butte #1 | 4/27 | 0 | 0.0 | 1.8 11.7 |
| Red Butte #2 | 4/27 | 0 | 0.0 | 0.0 3.7 |
| Red Butte #3 | 4/27 | 0 | 0.0 | 0.0 1.2 |
| Red Butte #4 | 4/27 | 0 | 0.0 | 0.0 0.0 |
| Red Butte #5 | 4/27 | 0 | 0.0 | 0.0 0.0 |
| Red Butte #6 | 4/27 | 0 | 0.0 | 0.0 0.0 |
| Seven Mile | | e | — | — |
| Seven Mile Pillow | | e | — | — |
| Silver Burn | 4/29 | 0 | 0.0 | 0.0 3.3 |
| Siskiyou Summit (Rev.) | 4/26 | 0 | 0.0 | 0.0 |
| Ski Bowl Road | 4/27 | 56 | 23.2 | 0.8 25.4 |
| South Fork Canal | 4/29 | 0 | 0.0 | 0.0 0.0 |
| Trap Creek | 4/28 | 0 | 0.0 | 0.0 4.2 |

SNOW

| DRAINAGE BASIN and/or SNOW COURSE | THIS YEAR | | PAST REC. | |
|-----------------------------------|----------------|------------------|-------------------|------------------------|
| | Date of Survey | Snow Depth (In.) | Water Cont. (In.) | Water Content (inches) |
| | | Last Yr. | Ave C | |
| KLAMATH | | | | |
| WATERSHEDS | | | | |
| Annie Spring | 4/28 | 90 | 43.2 | 2.6 44.4 |
| Billie Creek Divide | 4/25 | 14 | 5.9 | 1.5 12.0 |
| Billie Creek Div. Pillow | 4/25 | 12 | 5.0 | — |
| Billie Creek Div. Pillow | 4/25 | — | 7.3 | 2.0 |
| Chemult (Alternate) | 4/27 | 0 | 0.0 | 0.0 |
| Chiloquin (PP&L) | | No | Rpt. | |
| Cold Springs Camp | 4/24 | 64 | 26.0 | 8.2 |
| Cold Springs Camp Pillow | 4/24 | 30 | 13.2 | — |
| Cold Springs Camp Pillow | 4/24 | — | 14.7 | — |
| Crazyman Flat*** | 4/25 | 10 | 4.0 | 0.0 5.4 |
| Crowder Flat (Calif.) | | e | — | — |
| Crystal (PP&L) | | No | Rpt. | |
| Diamond-Crater Summit(Rev.) | 4/26 | 56 | 22.2 | 4.4 29.9 |
| Dog Hollow*** | 4/25 | 15 | 6.0 | 0.0 9.0 |
| Finley Corrals*** | | e | — | — |
| Fort Klamath (PP&L) | | No | Rpt. | |
| Fourmile Lake | 4/25 | 35 | 10.4 | 2.4 19.7 |
| Fourmile Lake Pillow | 4/25 | 56 | 26.0 | — |
| Fourmile Lake Pillow | 4/25 | — | 27.7 | 2.9 |
| Gerber | | e | — | — |
| Harriman (PP&L) | | No | Rpt. | |
| Howard Prairie Reservoir | 5/1 | 0 | 0.0 | 0.0 2.4 |
| Hyatt Prairie Reservoir | 5/1 | 0 | 0.0 | 0.0 |
| Kirk (PP&L) | | No | Rpt. | |
| Park Headquarters | 4/28 | 121 | 55.6 | 14.2 61.2 |
| Quartz Mountain | 4/27 | 0 | 0.0 | 0.0 0.5 |
| Seven Mile | | e | — | — |
| Seven Mile Pillow | | e | — | — |
| State Line (Calif.)*** | | e | — | — |
| Strawberry | 4/27 | 0 | 0.0 | 0.0 1.4 |
| Strawberry*** | 5/1 | 0 | 0.0 | — |
| Summer Rim | | e | — | — |
| Summer Rim*** | 4/25 | 33 | 13.2 | 0.1 15.6 |
| Summer Rim Pillow | | e | — | — |
| Sycan Flat*** | | e | — | — |
| Taylor Butte | 4/25 | 0 | 0.0 | 0.0 0.7 |
| Taylor Butte Pillow | | No | Rpt. | |

BASIC DATA SUPPLEMENT 1

MAY 1, 1978

SNOW

| DRAINAGE BASIN and/or SNOW COURSE | THIS YEAR | | | PAST REC. | |
|-----------------------------------|----------------|------------------|-------------------|------------------------|----------|
| | Date of Survey | Snow Depth (In.) | Water Cont. (In.) | Water Content (inches) | Last Yr. |

| LAKE COUNTY, GOOSE LAKE WATERSHEDS |
|------------------------------------|
| Adin Mountain (Calif.) |
| Bald Mountain (Nev.)*** |
| Bear Flat Meadow*** |
| Camas Creek #1 |
| Camas Creek #2 |
| Cedar Pass (Calif.) |
| Colvin Creek*** |
| Cox Flat*** |
| Crowder Flat (Calif.) |
| Dismal Swamp (Calif.)*** |
| Dismal Swamp (Cal.) Alt.*** |
| Finley Corrals*** |
| Hart Mountain*** |
| Little Bally Mtn. (Nev.)*** |
| Mt. Bidwell (Calif.) |
| North Star (Calif.) |
| Patton Meadows*** |
| Quartz Mountain |
| Rogger Meadows*** |
| Sherman Valley*** |
| Silver Creek |
| State Line (Calif.)*** |
| Strawberry |
| Strawberry*** |
| Summer Rim |
| Summer Rim*** |
| Summer Rim Pillow |
| Sycan Flat*** |

SNOW

| DRAINAGE BASIN and/or SNOW COURSE | THIS YEAR | | | PAST REC. | |
|-----------------------------------|----------------|------------------|-------------------|------------------------|----------|
| | Date of Survey | Snow Depth (In.) | Water Cont. (In.) | Water Content (inches) | Last Yr. |

| HARNEY BASIN WATERSHEDS |
|--------------------------|
| Blue Mountain Springs |
| Blue Mtn. Springs Pillow |
| Buck Pasture*** |
| Buckskin Lake*** |
| Call Meadows*** |
| Delintment Lake |
| Denio Creek*** |
| Disaster Peak (Nev.) |
| Emigrant Butte |
| Fish Creek |
| Fish Creek*** |
| Fish Creek Pillow |
| Hart Mountain*** |
| Idlewild Camp Alternate |
| Izee Summit |
| Lake Creek R.S. |
| Lake Creek R.S. Pillow |
| Oregon Canyon*** |
| Rock Spring |
| Silvies |
| Silvies*** |
| Silvies Pillow |
| Snow Mountain |
| Snow Mountain Pillow |
| Starr Ridge |
| Stinking Water |
| Trout Creek*** |
| "V" Lake |

LOWER COLUMBIA WATERSHEDS

| LOWER COLUMBIA WATERSHEDS | No | Rpt. | — | — |
|---------------------------|------|------|------|------|
| Blazed Alder | No | Rpt. | — | — |
| Mt. Hood Test Site | 4/27 | 108 | 49.8 | 28.4 |
| Mud Ridge Pillow | 4/28 | 0 | 0.0 | 10.6 |
| Mud Ridge Pillow | 4/28 | — | 0.0 | 7.3 |
| North Fork Reservoir | 5/1 | 0 | 0.0 | 14.5 |
| Still Creek | 4/28 | 0 | 0.0 | 6.2 |

*** Aerial reading.

T Trace

(a) Estimated. (b) 1958-72 adjusted average. (c) 1958-72, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

BASIC DATA SUPPLEMENT 2

MAY 1, 1978

SOIL MOISTURE

| DRAINAGE BASIN and/or STATION | | Profile (Inches) | | Date of Survey | Soil Moisture (Inches) | | |
|--|-----------|------------------|----------|----------------|------------------------|-----------|----------------------|
| Name | Elevation | Depth | Capacity | | This Year | Last Year | Average ^c |
| OWYHEE, MALHEUR WATERSHEDS | | | | | | | |
| Bear Creek (Nev.) | 7800 | 72 | 16.8 | 1 | | | -- |
| Big Bend (Nev.) | 6700 | 48 | 16.7 | 1 | | | 15.6 |
| Blue Mountain Spring | 5900 | 42 | 16.9 | 1 | | | -- |
| Mud Flat (Ida.) | 5500 | 48 | 12.8 | 1 | | | |
| Rodeo Flat (Nev.) | 6800 | 42 | 11.0 | 1 | | | 9.8 |
| Taylor Canyon (Nev.) | 6200 | 48 | 15.1 | 1 | | | 14.0 |
| BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS | | | | | | | |
| Blue Mountain Summit | 5100 | 36 | 16.8 | 4/25 | 16.0 | | 14.8 |
| Dooley Mountain | 5430 | 36 | 9.2 | 4/27 | 7.6 | 2.6 | 6.8 |
| Emigrant Springs | 3925 | 48 | 22.3 | 4/25 | 19.6 | 15.9 | -- |
| Ladd Summit | 3730 | 48 | 18.9 | 4/26 | 13.2 | 9.5 | 12.3 |
| Moss Springs | 5850 | 36 | 25.8 | 4/30 | 14.4 | 15.9 | 15.9 |
| Tollgate | 5070 | 48 | 23.6 | 4/25 | 17.4 | 18.3 | 19.0 |
| UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS | | | | | | | |
| Battle Mountain Summit | 4340 | 48 | 13.8 | 4/28 | 13.5 | 10.8 | 13.5 |
| Emigrant Springs | 3925 | 48 | 22.3 | 4/25 | 19.6 | 15.9 | -- |
| Tollgate | 5070 | 48 | 23.6 | 4/25 | 17.4 | 18.3 | 19.0 |
| UPPER JOHN DAY WATERSHEDS | | | | | | | |
| Battle Mountain Summit | 4340 | 48 | 13.8 | 4/28 | 13.5 | 10.8 | 13.5 |
| Blue Mountain Spring | 5900 | 42 | 16.9 | 4/28 | 12.6 | 7.9 | 13.1 |
| Blue Mountain Summit | 5100 | 36 | 16.8 | 4/25 | 16.0 | | 14.8 |
| Derr | 5670 | 24 | 9.0 | 1 | | | -- |
| Marks Creek | 4540 | 36 | 14.1 | 4/28 | 12.4 | 10.3 | 13.3 |
| Snow Mountain | 6300 | 48 | 16.7 | 1 | | | -- |
| Starr Ridge | 5150 | 36 | 10.6 | 4/28 | 10.6 | 8.8 | 10.4 |
| UPPER DESCHUTES, CROOKED WATERSHEDS | | | | | | | |
| Derr | 5670 | 24 | 9.0 | 1 | | | -- |
| Marks Creek | 4540 | 36 | 14.1 | 4/28 | 12.4 | 10.3 | 13.3 |
| Snow Mountain | 6300 | 48 | 16.7 | 1 | | | -- |
| KLAMATH WATERSHEDS | | | | | | | |
| Quartz Mountain | 5230 | 48 | 15.3 | 4/27 | 9.9 | 6.8 | 9.5 |
| LAKE COUNTY, GOOSE LAKE WATERSHEDS | | | | | | | |
| Camas Creek | 5720 | 42 | 14.5 | 4/27 | 12.3 | 9.9 | 13.1 |
| Quartz Mountain | 5230 | 48 | 15.3 | 4/27 | 9.9 | 6.8 | 9.5 |
| HARNEY BASIN WATERSHEDS | | | | | | | |
| Blue Mountain Spring | 5900 | 42 | 16.9 | 4/28 | 12.6 | 7.9 | 13.1 |
| Silvies | 6900 | 48 | 16.4 | 1 | | | -- |
| Snow Mountain | 6300 | 48 | 16.7 | 1 | | | -- |
| Starr Ridge | 5150 | 36 | 10.6 | 4/28 | 10.6 | 8.8 | 10.4 |
| Willow-Bald | 5000 | 24 | 6.6 | 4/28 | 6.6 | 5.2 | 6.1 |

1 Not Scheduled

(a) Estimated. (b) 1958-72 adjusted average. (c) 1958-72, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

BASIC DATA SUPPLEMENT 3

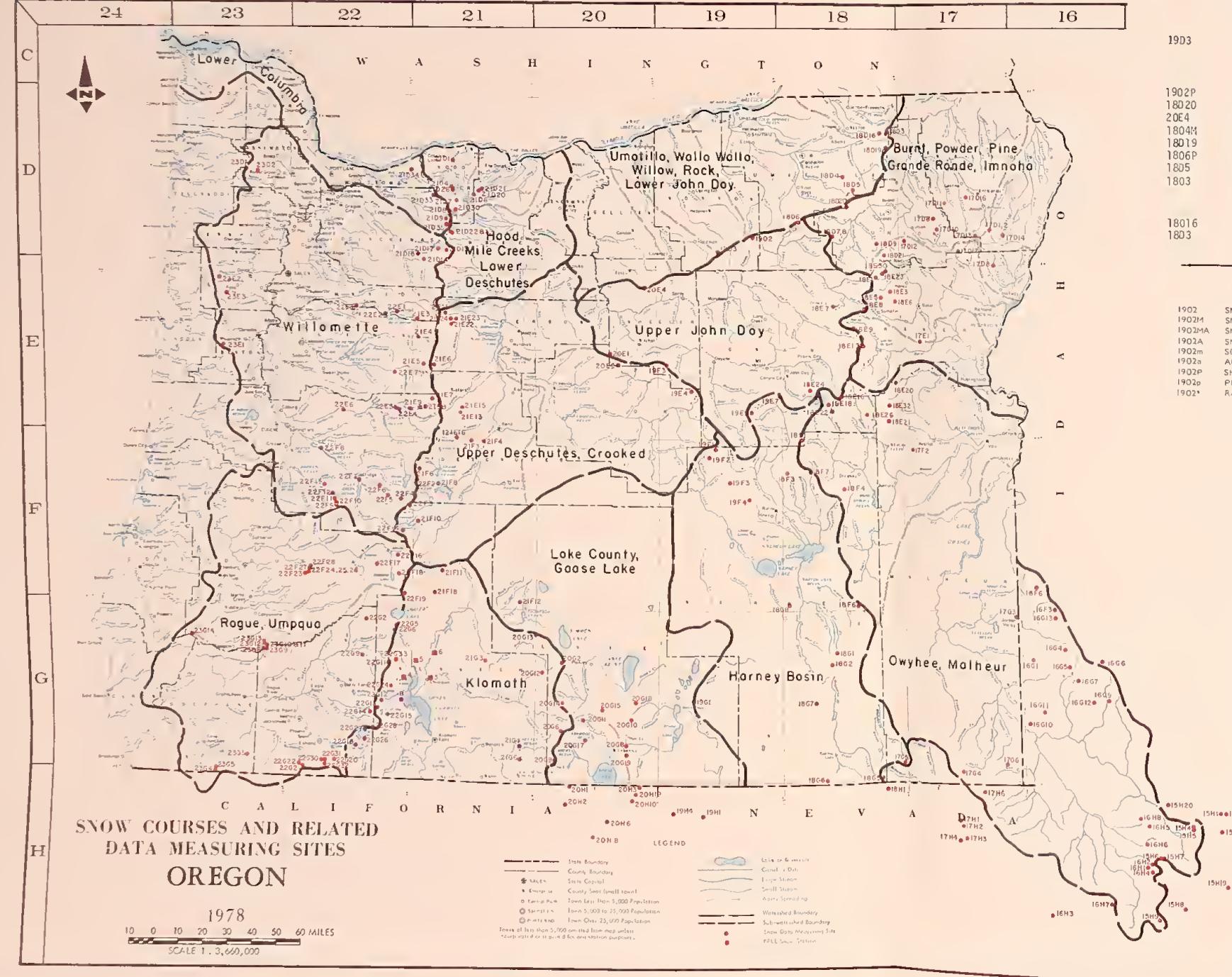
MAY 1, 1978

PRECIPITATION (Inches)

| DRAINAGE BASIN and PRECIPITATION GAGE LOCATION | ELEVATION | CURRENT INFORMATION | | PAST RECORD | |
|--|-----------|----------------------|---------------|-------------|----------------------|
| | | Date of Reading | Precipitation | Last Year | Average ^c |
| Beaver Reservoir (Union County) * | 5150 | From 3/27 To 5/1 | 3.00" | -- | |
| Billie Creek Divide (Jackson County) * | 5300 | From 3/30 To 4/25 | 3.60" | 2.64" | |
| Bourne (Baker County) * | 5800 | From 3/31 To 4/27 | 3.60" | -- | |
| Bowman Spring (Union County) * | 4580 | From 3/28 To 4/30 | 5.25" | -- | |
| Camas Creek #1 (Lake County) | 5825 | From 3/30 To 4/27 | 5.40" | 0.80" | |
| Cold Springs (Klamath County) * | 6100 | From 3/28 To 4/24 | 3.60" | -- | |
| Eilertson Meadow (Baker County) * | 5400 | From 3/27 To 4/25 | 3.84" | -- | |
| Emigrant Springs (Umatilla County) * | 3925 | From 3/28 To 4/25 | 5.40" | -- | |
| Gold Center (Grant County) * | 5340 | From 3/27 To 4/25 | 3.96" | -- | |
| High Ridge (Umatilla County) * | 4150 | From 3/29 To 4/27 | 4.68" | -- | |
| Irish Taylor (Deschutes County) * | 5500 | From 3/29 To 4/27 | 5.76" | -- | |
| Lucky Strike (Umatilla County) * | 5050 | From 3/28 To 4/30 | 4.00" | 1.50" | |
| Marks Creek (Crook-Wheeler Cos.) | 4540 | From 3/31 To 4/28 | 2.50" | 0.80" | |
| Mt. Hood Test Site (Clackamas County) * | 5555 | From 3/30 To 4/27 | 10.44" | -- | |
| Quartz Mt. Summit (Lake County) | 6300 | From 3/29 To 4/27 | 5.45" | 0.20" | |
| Schneider Meadows (Baker County) * | 5400 | From 3/27 To 4/30 | 8.88" | -- | |
| Seine Creek (Washington County) * | 2150 | From 3/29 To 4/28 | 4.90" | 1.10" | |
| Strawberry (Lake County) | 5760 | From 3/25 To 4/27 | 6.00" | 1.20" | |
| Summit Lake (Klamath County) * | 5600 | From 3/28 To 4/26 | 6.96" | -- | |
| Taylor Butte (Klamath County) | 5040 | From 3/31 To 4/25 | 2.28" | 0.36" | |
| Taylor Green (Union County) * | 5800 | From 3/27 To 4/30 | 7.80" | 0.00" | |
| Tipton (Baker County) * | 5100 | From 3/27 To 4/25 | 2.04" | 1.44" | |

* SNOTEL Reading

(a) Estimated. (b) 1958-72 adjusted average. (c) 1958-72, 15 year average (d) Corrected to natural flow. (e) Not scheduled.



Map and Index to OREGON SNOW COURSES



The Following Organizations Cooperate in the Oregon Snow Survey Work

STATE

Idaho Cooperative Snow Surveys
Nevada Cooperative Snow Surveys
Oregon State University
Oregon Department Of Water Resources
Soil and Water Conservation Districts of Oregon

COUNTY

Douglas County Water Resources Survey

FEDERAL

Department of Agriculture
Cooperative Extension Service
Forest Service
Soil Conservation Service
Department of Commerce
NOAA, National Weather Service
Department of the Interior
Bonneville Power Administration
Bureau of Land Management
Bureau of Reclamation
Fish and Wildlife Service
Geological Survey
Department of National Defense
Corps of Army Engineers

PUBLIC UTILITIES

Pacific Power and Light Company
Portland General Electric Company
California-Pacific Utilities Company

MUNICIPALITIES

City of Baker
City of La Grande
City of The Dalles
City of Walla Walla

IRRIGATION DISTRICTS

Arnold Irrigation District
Associated Ditch Companies
Burnt River Irrigation District
Central Oregon Irrigation District
East Fork Irrigation District
Grants Pass Irrigation District
Hood River Irrigation District
Jordan Valley Irrigation District
Juniper Flat Irrigation District
Lakeview Water Users, Incorporated
Medford Irrigation District
Middle Fork Irrigation District
North Board of Control - Owyhee Project
North Unit Irrigation District
Ochoco Irrigation District
Rogue River Valley Irrigation District
South Board of Control - Owyhee Project
Squaw Creek Irrigation District
Talent Irrigation District
Tumalo Project
Vale - Oregon Irrigation District
Warmsprings Irrigation District

PRIVATE ORGANIZATIONS

The Crag Rats, Hood River, Oregon



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SOIL CONSERVATION SERVICE
1220 S.W. THIRD AVE.
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